The Harveian Oration

ON

THE INFLUENCE OF CHARACTER AND RIGHT JUDGMENT IN MEDICINE.

Delivered before the Royal College of Physicians of London on Oct. 18th, 1898,

BY SIR DYCE DUCKWORTH, M.D., LL.D. EDIN.,

FELLOW AND TREASURER OF THE COLLEGE; HONORARY FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS OF IRELAND; PHYSICIAN AND LECTURER ON MEDICINE AT ST. BARTHOLOMEW'S HOSPITAL; HONORARY PHYSICIAN TO H.R.H. THE PRINCE OF WALES.

SIR SAMUEL WILKS (President of this College), FELLOWS, AND GENTLEMEN,—The honourable task which is imposed upon me to-day carries with it, year by year, a heavier burden and an increased responsibility. I suppose that not fewer than 180 Harveian Orators have taken their places in this venerable College to carry out the project of that great man whose character and work we so appropriately commemorate on this festival of "the beloved physician." When we reflect that the orators have in nearly every instance come fresh to the task, have brought all their learning and literary skill to bear upon it, have not seldom in the past clothed it in the purest Latin or the most classical English, and have no less enriched both the science and art of medicine by many of these efforts, the latest of that band may well invoke to-day some of the divine *ἐνθουσιασμός* to descend upon him as he sets out to follow the well-worn road which lies before him. For myself I may say that I yield to none in the interest which this duty has for me. As Physician to the great hospital which Harvey served,[1] as his successor in this College, *longo intervallo*, in the capacities of its Treasurer[2] and Lumleian Lecturer,[3] and as one of the eight Fellows, of whom only three now survive, who on this day fifteen years ago had the privilege of bearing his body, "lapt in lead," to its final resting-place on the occasion of the translation of his remains at Hemel Hempstead, I find myself in particular sympathy with the object and circumstance of our meeting to-day.

Inasmuch as Harvey himself conceived the idea of this Oration[4] and definitely laid down the specific objects of it, I take it to be the plain duty of the orator to obey his directions as loyally as possible, and in doing so I hope to find suggestive lines of thought for interesting and fruitful comment. It is therefore my duty first to commemorate some of the greatest benefactors of this College; secondly, to incite our Fellows and Members to search out and study the secrets of nature; and thirdly, to urge a spirit of gracious courtesy and kindliness amongst ourselves. Harvey's primary consideration in this matter was without doubt to maintain the position and dignity of his beloved College, to foster its usefulness, and to keep it well abreast of the knowledge and learning of the day, so that by its influence it might impart a high and beneficial tone to the whole commonwealth of medicine in England. It was a high ideal, but not too high for the best spirits in this College; and that, sir, and no less, I will venture to say, is our ideal of its position to-day—a day in which we bear witness to many and radical changes of circumstance indeed, but in which, notwithstanding, we are still full of energy and good purpose, full of strong will and intention to hold that position and, if possible, to add to it.

When Harvey enjoined upon the orator the duty of commemorating the chief benefactors of the College the task was comparatively simple, but happily for us, thanks to the many benefits our Fellows have conferred upon our commonalty, it would now be little less than wearisome to enumerate them and allude even briefly to their varied benefactions. Few will demur to the statement that Harvey himself has been our greatest benefactor, whether by reason of the immortal lustre he shed upon us by his epoch-making discovery and teaching, or in respect of his substantial gifts and the bequest to us of his patrimonial estate. And no less, I would add, has been the boon he conferred upon this College for all time by the legacy of his personal character and qualities—qualities which none of his successors here can afford to forget or neglect. Some of our greatest benefactors have not been, so far as I can learn, recently commemorated by our orators. I will, therefore, claim your indulgence while I praise some of the good men to whom we are indebted for many of our privileges and opportunities of usefulness.

Foremost I place Thomas Linacre, our founder and first President in 1518. Let it be remembered that he designed this Corporation as well for the benefit of the public as of the profession. His wisdom, scholarship, and moral excellence rendered him, as has been said, "the ornament of his age." The College meetings were held in his private house,[5] which he made over to the Physicians, and this was our first building, subsequently enlarged and used till 1614. The Lumleian Lectures were first delivered there. As our learned orator two years ago showed, Linacre may be regarded as "the intellectual grandfather of Harvey," and in virtue of his translations of Aristotle and Galen, Dr. Payne placed him in the front rank of the medical Humanists, pointing out, further, as we well remember, how out of these scholarly efforts grew the scientific movement which led to a truly fertile study of biology.

John Caius, nine times elected President, must ever be revered here for his beneficent efforts. He erected a monument in St. Paul's Cathedral to Linacre, whom he is held to have taken as his model in life. Caius began our volumes of Annals and thus set an example to all succeeding registrars which has certainly been well followed to the present time. He instituted those "ensigns of honour" by which our President is distinguished amongst us. He was the first to introduce and teach practical anatomy in England. His scholarship and literary works, his method and precision, rendered him one of the most noteworthy men our profession has ever had in any country. We recall his efforts and munificence in refounding Gonville Hall at Cambridge, a college which has sent to us here, and still continues to send, some of our most distinguished Fellows and Members. Harvey's lines of thought and study were probably, as Dr. Payne suggests, much projected under the posthumous influence of the second founder of his college.

I merely mention the names of Caldwell and Lord Lumley, the founders in 1581 of our Lumleian Lectures which Harvey held for forty-one years and in which he expounded his original investigations on the circulation of the blood, and refer next to William Gilbert, sometime Treasurer, and President in 1600. Gilbert was the father of experimental philosophy in England. His famous work "De Magnete" first directed the mind of Galileo towards this and kindred subjects. He bequeathed to the College his library, globes, and instruments, most of which perished in the great fire of 1666, only 140 volumes of his books being rescued.

We commemorate Theodore Goulston as the founder, in 1632, of the lectures bearing his name, which he designed to be delivered in each year by one of the four youngest doctors of the College. He was excellent both as a physician and a scholar and published translations from Aristotle and Galen.

Baldwin Hamey, junior, ranks with Harvey amongst our greatest benefactors. He redeemed at his own cost the first College building in Amen Corner from a possible confiscation to the spoliators of Church property in 1651, contributed largely to the fund for rebuilding the College after the great fire, and wainscoted the coenaculum with Spanish oak, some of which now lines the walls of our Censors' room. In 1672 he made over for ever his Essex property of Ashlyns, an estate of 400 acres, for its immediate benefit, including, by the way, an equivalent sum to that appointed by Harvey as the honorarium of the Harveian Orator. Hamey's bust executed in 1684 and his portrait both look down upon us to-day from these walls. The agricultural depression of recent years has unfortunately affected the property so nobly bequeathed to us, but we still count it amongst our best certain sources of income.

We honour the memory of Francis Glisson, sometime President.[6] Working on the lines of research laid down by Harvey, Glisson enlarged the knowledge of anatomy and pathology, and of the fruits of his studies we avail ourselves in daily practice. In thus wresting veritable secrets from

[1] 1608?—1633. [2] 1628, 1629. [3] 1615—1656. [4] 1656. [5] The Stone House, No. 5, Knightrider-street. [6] 1667—1669.

nature[7] he was truly a benefactor to this College, and in respect of his work on the subject of rickets, still known as the English disease, a benefactor to his countrymen.

We may not omit to recall to memory the benefactions of the Marquis of Dorchester. A diligent and widely read student in the learning of his day he was urged by Harvey and others to join this College in 1656. Two years later he was admitted to the Fellowship. Sympathising with the College in the loss of its library, and to show his respect for the profession, he bequeathed a collection of books of the value of £4000 and contributed £100 towards the library. What a splendid example was this, and how little has it been followed in the last two centuries.

It is a fact to note here and now, for while we have had in recent times some noble instances of beneficence for the institution of lectureships and prizes we have had hardly any gifts or bequests in the form of endowments for the College itself—endowments which I, as your treasurer, can well certify are more than is commonly believed necessary to enable us to maintain our position, our fabric, and our library. Those of us who are engaged in teaching in this metropolis have to acknowledge that in these days the vital interests of higher learning make little appeal to the sentiments or generosity either of wealthy peers or commoners whose interests lie largely in London; while we take note of the fact that learned institutions in the provincial cities, void as yet of traditions, have no difficulty in arousing and stimulating such qualities in the hearts of their citizens and enlisting from them noble gifts and benefactions. This is a Royal, but unendowed, College, yet it is constantly appealed to for advice by the several offices of the State which thus receive gratuitous assistance for the benefit of the public. I venture to think that a corporation such as this well commends itself to the consideration and substantial liberality of persons of wealth and patriotic intelligence resident in London. We might at least look for one such donor as Lord Dorchester in each century, and the College will welcome such benefactors and not fail to commemorate their good deeds in the days to come, thus securing for them an enviable immortality.

Let us praise William Croone, Fellow of Emmanuel College, Cambridge, a Censor of this College in 1679 and founder of the lectureship which bears his name. With his memory we associate that of his widow, Lady Sadlier, who loyally carried out his wishes in providing a fund for the endowment of the lectures.

I turn now to hold up in honour some others of our distinguished Fellows who by their attainments and splendid personal characters have conferred undying benefits upon our College and through it upon the profession of physic. We are perhaps too much disposed to commemorate the scientific achievements of our great men, but let us not be unmindful of their characters. We know that genius is not always coincident with the highest moral or spiritual perfection, but when both these qualities are graciously combined in anyone we feel that we are in the presence of a truly great man, of one who becomes a personage and a power for good in his day and generation. In such a profession as ours we can never afford to lose sight of the preponderating influence of character in all who join our ranks and have to minister to every grade of our common humanity. The training which enabled Harvey to be the man we know him to have been, the scholarly, wise, even-minded, and unworldly man, was that which best begets men of his mould. No mere technical or narrow training could by itself have produced him. His mind was expanded by wide reading, by travel, by knowledge of men and manners, by contact with the best spirits of his age, and by honest service to both rich and poor. His character, too, was formed by deep religious sentiment, by a pure faith, and by gentle sympathy with his fellow-men. He probably owed much, as many great men do, to the influence of his mother, for we know that she "was reverensed of her children."

In Harvey we have indeed a splendid model of the ideal physician, for not only have we to cultivate wide learning for its own sake, and its unquestionable influence upon us, but we have to see to it, if anything more assiduously, that we be men of the highest character. If the factor of high character was a great one in Harvey, and a gracious achievement in the seventeenth century, can it be doubted that it is a less imperative quality for us in the declining years of the nineteenth? I almost fear that in this restless age, so prolific in novel developments, there have opened out before us, more than is easy to steer clear of, many new channels wherein our moral integrity may be severely tried; and we may not seldom be tempted by a thoughtless and credulous public to deviate into courses which a strictly disciplined and finely tempered nature must ever recoil from. Yes, character must always be the mainstay and regulator of our conduct both amongst ourselves and towards the public whose servants we are. This requirement should receive emphatic recognition in every commemoration of Harvey. We may well learn from the examples of Harvey and from others which I shall venture to present to you what manner of men physicians should strive to be. If time permitted me I might say much in praise of Arbuthnot and Mead, of Hale, who left us £500 for our library, and of Freind; but I pause to commemorate William Heberden, author of the famous "Commentaries,"[8] who, by his learning, wisdom, and high character, left us a legacy of which the College may be proud. We may understand what manner of man he was if we realise what Dr. Macmichael wrote of him: "From his early youth he had entertained a deep sense of religion, a consummate love of virtue, an ardent thirst for knowledge, and an earnest desire to promote the happiness and welfare of all mankind. By these qualities, accompanied with great sweetness of manners, he acquired the love and esteem of all good men in a degree which perhaps very few have experienced."

Sir George Baker, President for ten years, was pre-eminent as a scholar and practical physician. His method of research on the nature of Devonshire colic has truly been pronounced to be a model for the conduct of scientific medical work. Greatly appreciated and honoured in his time, his memory remains with us a precious heirloom.

I speak next of Matthew Baillie, who delivered the Harveian Oration exactly a century ago, but, so far as is known, did not publish it. Baillie was at that time thirty-seven years of age and engaged in teaching anatomy. We may perhaps assume that some anatomical exposition formed the subject of his oration, for though he had then been in practice for twelve years he did not begin to record his clinical experiences for twenty-one years afterwards, hoping to secure the leisure, which he never did, to elaborate this work. We may greatly regret this inability, for his clinical records were admirable and in advance of their time. Baillie's energies were therefore devoted to his patients when his powers and intellect were at their best, and, as is not seldom the case when physicians of eminence are eagerly sought by numerous patients, but little time and strength were left to pursue fresh study or publish newly acquired experience. Of such men little remains to tell of their special skill or of the qualities they exhibited in practice. Baillie worked seventeen hours a day. His benefactions to this College were great. He gave in his lifetime his private collection of morbid specimens, now in our Museum. He bequeathed at his death, in 1823, a legacy of £300, with all his medical books and the copper-plates of his work on "Morbid Anatomy." This book was the product of his industry in his uncle William Hunter's museum and is of especial value because in his later editions of it he described the clinical features of the cases which furnished the morbid specimens. He was thus one of the pioneers of the modern school of physicians, trained on the lines laid down by Harvey to prosecute research by observation and experiment. I conceive that Baillie may be regarded as the English Morgagni of his time, but he was even more lucid and precise than his great predecessor.[9] He left on record a very pregnant sentence which we shall do well to remember, for we need its wisdom now as much as in the days when it was written.[10] "I am persuaded," he remarks, "that the most successful treatment of patients will

[7] "I am glad to be able to-day for the second time to credit the English nation with the service of having made the first attempts to define the character of life. It was Francis Glisson, who following expressly in the footsteps of Paracelsus, investigated the *principium vitæ*. If he could not elucidate the nature of life he at least recognised its main characteristic. This is what he was the first to describe as 'irritability,' the property on which the energy of living matter depends."—Professor Virchow, Huxley Lecture, delivered in London, 1898.

[8] Commentarii de Morborum Historia et Curatione"—a posthumous work, 1802.

[9] Morgagni was born twenty-five years after Harvey's death. Baillie was born seventy-nine years after Morgagni.

[10] "Lectures and Observations drawn from my own experience upon a considerable number of diseases." London. 1825. (A posthumous work, of which only 150 copies were printed for private circulation in accordance with the directions in Dr. Baillie's will.)

depend upon the exertion of sagacity,[11] or good common sense,[12] guided by a competent professional knowledge; and not by following strictly the rules of practice laid down in books even by men of the greatest talents and experience." Baillie acknowledged that he owed a good deal to Dr. David Pitcairn of St. Bartholomew's Hospital, who was his firm friend. He learned from him that rheumatism was frequently the cause of disease of the heart—a fact which had not been previously recognised; also, that ague was often not amenable to the influence of bark unless a course of calomel preceded it. An example of Baillie's sagacity is furnished by his conjecture that hydatids were animals, an opinion not held at that time. To tell only of Baillie's scientific work, however, is to disclose but a part of his illustrious career. As Sir Henry Halford said of him in announcing his bequests to the College, "Justice cannot be done to his medical character unless that important feature in it which appeared in every part of his conduct and demeanour—his religious principle—be distinctly stated and recognised." As in Harvey, so in Baillie: "Ample converse with one of the most wonderful works of the Creator—the formation of man—inspired in him an admiration of the Supreme Being which nothing could exceed." He had indeed "looked through nature up to nature's God." His moral loftiness and his splendid character secured for him the deepest regard and affection of his professional brethren. We cannot neglect to commemorate and praise the man of whom so much could be said by a contemporary who knew him well. May Baillie's spirit and influence ever prevail in this College!

It would be a pleasant task to illustrate further the value and charm of high character when blended with learning and skill in our profession by the splendid examples of Henry Halford, Peter Mere Latham, Thomas Watson, and George Burrows, who have lived and laboured in our own day, shed lustre on this College, and earned places amongst our worthiest benefactors. But I must desist. By Harvey's direction I exhort you, and I exhort myself, to imitate such men as we have praised and commemorated; and in striving to this end we shall find help and inspiration if we look back and discover what manner of men the English physician was in the earlier part of this century. He was then regarded as combining in his person, "not only the qualifications necessary for the successful practice of physic, but those which give dignity to his professional and respectability to his private character. He was distinguished by large attainments as a scholar, by sound religious principles as a Christian, by practical worth and virtue as a good member of society, and by polished manners as a well-bred gentleman."[13] I trust that I may be pardoned for dwelling at some length on this part of Harvey's charge, since, to the best of my belief, it has not received prominent notice from my predecessors during the last thirty years.

I have next to repeat to you to-day our great master's injunction "to search and study out the secrets of Nature by way of experiment." It may truly be said that there is no lack of research in our time into the secrets of nature. On the contrary, we are presented with a plethora of products emanating from our laboratories as the result of the original inquiries; and our difficulty now is to discover their true value and to find a fitting employment for the knowledge thus brought to light. The younger men amongst us are naturally attracted both to fresh research and the application of its fruits in clinical work. The elders, by their longer experience of humanity, both in its well-being and its woes, are less eager to engage in experimental methods and prefer to practise the hard-earned principles which have gradually commended themselves to them.[14] Do what we will, however, truths either new or in fresh aspects move steadily onwards and come in the fulness of time to occupy the field. For our purposes as physicians, the secrets of nature disclosed in the laboratory require to be brought to the touchstone of clinical experiment and observation. If they be veritable facts they serve at once to advance our art by enlarging our powers to cope with diseased conditions; while if the results of laboratory experiments have been incompletely wrested from Nature they will fail to aid us, though, perchance, they may prove suggestive. Of some, I think, it may be said that they fail *primo visu* to commend themselves to our common sense. I will support this assertion by a reference to some recent laboratory researches undertaken in America. With a view to determine the influence of alcohol in morbid conditions certain rabbits were inoculated with streptococci and other microbes and then kept daily in a state of acute intoxication by alcohol. These animals showed the effects of the inoculation earlier and more severely than rabbits which were similarly infected, but not alcoholised. It has been proved that alcohol in poisonous doses exerts a negative chemiotaxis in the tissues and it is also well known that a prolonged abuse of it by man causes widespread degenerations.

On the strength of these and similar phenomena we are gravely warned from the laboratory that it must be disastrous to employ even moderate doses of alcohol in inflammatory conditions of disease in the human subject. I trust that we may keep our minds clear on this matter and pray daily for a right judgment in all things. The laboratory operator may tell us that alcoholic stimulants are bad for this or that disease, but we shall maintain that they are sometimes very good for the patient. The practitioner who could allow the teaching of such experiments as I have quoted to influence his bedside treatment of patients suffering from acute diseases would, in my opinion, possess neither clinical instinct nor knowledge.

Yes, clinical instinct or intuition, for I maintain that none can be skilful in medicine without it. Call it sagacity, common sense, or what you will, the physician must possess it, and it must direct his methods, whether they proceed from the laboratory or elsewhere. The present danger in this matter—and it is a real one—is that the modern spirit of research tends in some degree to withdraw our attention from facts and principles which have been well established for us by the clinical acumen of past masters of our art, and which in the best interests of our patients we can ill afford to lose. New methods thus come to displace old ones and not always with benefit. While keeping open minds we must not dispense with the caution that the new is not necessarily the true. I have ventured to utter this note of warning, but I would not for one moment be regarded as indifferent to the unquestioned triumphs of modern laboratory research in all directions. While Harvey clearly intended the orator of each year to be in the first part of his discourse *laudator temporis acti*, he was the last man to plant himself down immoveably, and rest content as though the goal of research had been reached. Knowing too well in his own day the evil and tyranny of stereotyped traditions and beliefs,[15] and shrewdly foreseeing the necessity of perpetual progress in medicine, he definitely charged us to encourage fresh research; and therefore I will express my entire agreement with the words used by one of my esteemed predecessors and former colleagues eight years ago in his oration: "It will be an evil day for medicine and physiology if ever the results of laboratory work are held to have no bearing upon

---

[11] ἀγχίνοια (Aristotle).

[12] "Common Sense (a faculty of more use to the practical physician than all the science of a Newton), and approved by the experience of every age." "A proper decision as to treatment requires experience, tact, and long-headedness."—John Goodsir, "Anatomical Memoirs." W. Turner, M.B., with biography by H. Lonsdale, M.D., p. 77. Edinburgh: 1868.

[13] Obituary notice of George Williams, M.D., Vice-President of Corpus Christi College, Oxford, and Professor of Botany; Fellow of this College.—Gentleman's Magazine, March, 1834.

[14] "No man who had attained the age of forty years was found to adopt Harvey's doctrine of the circulation; it had to win its way under the safeguard ..... of the youthful and unprejudiced spirits of the age."—Life of Harvey, p. xlvii., R. Willis.

[15] "The facts cognisable by the senses wait upon no opinions. The works of Nature bow to no antiquity; for, indeed, there is nothing either more ancient or of higher authority than Nature." "We are to strive after personal experience, not to rely on the experience of others. ..... Nature is herself to be addressed, the paths she shows are to be boldly trodden, for thus, and whilst we consult our proper senses, from inferior advancing to superior levels shall we penetrate at length into the heart of her mystery." "True philosophers, who are only eager for truth and knowledge, never regard themselves as already so thoroughly informed but that they welcome further information from whomsoever and whencesoever it may come; nor are they so narrow-minded as to imagine any of the arts and sciences transmitted to us by the ancients in such a state of forwardness and completeness that nothing is left for the ingenuity and industry of others." (Letter to Dr. Argent and the Fellows of the College). "Nature—the word that stands for the baffling mysteries of the universe. Steadily, unflinchingly, we strive to pierce the inmost heart of Nature, from what she is to reconstruct what she has been and to prophesy what she yet shall be. Veil after veil we have lifted and her face grows more beautiful, august, and wonderful with every barrier that is withdrawn."—Presidential Address at the British Association Meeting, Bristol, 1898: Sir William Crookes. "Nature is the art of God."—Sir Thomas Browne. 163[illegible].

medical practice."[16] So long as we prudently avail ourselves of these results we shall not fail to add to the credit and beneficence of our art. The so-called "practical" man is the one likely to avail himself of immature laboratory researches. As Professor Kanthack remarks: "Paracelsus is not yet dead. He snatches incomplete researches out of the laboratories and applies them in the treatment of diseases, the pathology of which he does not understand, and his influence makes itself felt in laboratories to the discredit of medicine."[17] What we greatly need now in England are research laboratories attached to our hospital wards and post-mortem theatres, and no less a select staff of fully-trained investigators available for service throughout the empire. It is surely humiliating that we permit researches to be made for our benefit in various parts of our dominions by foreigners, while many of our countrymen and countrywomen, owing to ignorance and mawkish sentimentality, are doing their best to debar the training of such men in England.

The day in which it has been affirmed that there is a gulf fixed between physical and spiritual science is, I think and hope, fast drawing to its close. The temper of mind which leads, however honestly, to such a belief was not that of Harvey nor, indeed, has it been that of the majority of physicians of this College whom we reckon among the most exemplary men of the past. I will venture to say, further, that it is not the aspect in which such matters are viewed here and now. As Willis observes, Harvey "seized every opportunity of giving utterance to his sense of the immediate agency of the Divine in Nature."[18] He had no fear either of the processes or the results of research. We can imagine his approval of the following sentences in the "Religio Medici" which he must have read: "There is no danger to profound these mysteries, no *sanctum sanctorum* in philosophy. The world was made to be inhabited by beasts, but studied and contemplated by man; 'tis the debt of our reason we owe unto God, and the homage we pay for not being beasts. ..... Those highly magnify Him, whose judicious inquiry into His acts, and deliberate research into His creatures, return the duty of a devout and learned admiration. Therefore:

> "'Search where thou wilt; and let thy reason go,
> To ransom truth, e'en to the abyss below;
> Rally the scattered causes; and that line
> Which Nature twists be able to untwine.
> It is thy Maker's will; for unto none
> But unto reason can He e'er be known.'"

I will now refer to some researches which are of especial interest to us at the present time. They relate to bacteriology. Starting with the conception of bacillary invasion of the body,[19] and the mischief thereby engendered, we naturally seek to destroy the germs themselves and to undo their evil effects. Preventive medicine has for its aim the provision for us of an environment destitute of noxious germs and is now achieving brilliant success in its progress; but in practical medicine the physician has as yet to be satisfied with the endeavour to combat the ill effects of such germs as have gained entry to the body by restoring to the natural standard that impaired vitality of the system which has enabled the bacteria to gain the upper hand. In the gravest cases, where bacillary invasion is widespread and rampant, as in the exanthemata, continued fevers, or pyæmia, we are in the presence of a dosage of toxins so overwhelming that it cannot be met by any adequate systemic resistance. We have as yet but few antitoxins available in practice, though we look with confidence in the future to the fruitful labours of our laboratories for more of such agents.

Our present inability, then, leads us to consider the solitary factor on which we have to depend and which is in each case to determine the issue. We term it the bodily, or tissue, resistance. What is the full significance of it? The varying vulnerability of the individual is the factor before us in each patient and we have to gauge this as nicely as we can. A toxic dosage which is certainly lethal for some is not so for others. The soil, so to say, is, or has somehow become, favourable for the full development of the toxin in the one case, while in the other a degree of immunity exists which proves adequate to overcome the noxious dose, the soil being unfavourable for its full development. This is a matter of the constitution, a personal peculiarity or proclivity, either inherited or acquired. We call it the personal factor in each case and therefore a physician never speaks of treating *diseases* but of treating *patients*.[20] Our knowledge of these personal factors is not large and as yet not very accurate. Theoretically, we might conceive that the highest condition of health, with full integrity of the vital organs, should provide the fullest measure of immunity against all forms of bacillary toxin, whereas in practice we know that in the case of many of them, as in that of small-pox, cholera, or diphtheria, such immunity is of little or no avail and that death may result from an overpowering multiplication of the specific peccant matter. Happily, we can now control the invasion of small-pox and are able materially to counteract the diphtheritic virus by an antitoxin. And so with some other diseases.

Let us take the case of persons of that habit of body in which tuberculosis is apt to occur. We must regard them as presenting in some of their textures an appropriate *nidus* for the cultivation of the specific bacilli. Could we shield them from all possible contact with these germs we might fairly anticipate for them an average longevity, though, as I shall presently show, their textures constitute a bad soil for the inroad of most diseases. We know that under certain depressing conditions, whether of climatic or other environment, the tissues even of fairly healthy bodies lose their resistance and become a prey to the activity of various bacillary parasites, affording examples of sundry specific disorders. The problem before us in all such cases is to determine, if we can, the ratio of the force of resistance to that of the infection. Too often we have but to study the course of the disease in order to decide this point, and while treating the patient, as we watch the contest,[21] we sometimes discover evidence of inhibiting factors which prove adequate to check the mischief arising from parasitic invasion. We have an example of this in the case of a proclivity to gout, which tends markedly to check tuberculous invasion, and when this occurs to protract its course.[22] There is reason to believe that some constitutions are practically invulnerable against the infections of tuberculosis, rheumatism, marsh-poison, and others. We need to study carefully the causes of such immunity since, as Harvey urged, many problems are to be solved by the investigations of exceptional cases.[23]

The subject of scrofula is just now engaging the attention

[16] Dr. James Andrew.

[17] "The Science and Art of Medicine." Address to the Abernethian Society of St. Bartholomew's Hospital. St. Bartholomew's Hospital Journal, August, 1898.

[18] "Nempe agnoscimus Deum, Creatorem summum atque omnipotentem, in cunctorum animalium fabrica ubique presentem esse, et in operibus suis quasi digito monstrari."—"De Gen. Animalium," Exerc. liv. "Harvey's education and his epoch made him, as a believer reverential: he was by nature modest, and being a sound observer he was neither superstitious nor illogical. ..... Far above all he was taught by Nature."—Harveian Oration, 1855, Sir Henry Acland. "Physical and spiritual science seem to the world to be distinct. One sight of God as we shall one day see Him will show us that they are indissolubly and eternally the same."—Charles Kingsley. "Science is great, but she is not the greatest. She is an instrument and not a power—beneficent or deadly, according as she is wielded by the hand of virtue or vice. But her lawful mistress, the only one which can use her aright, the only one under whom she can grow and prosper and prove her Divine descent, is Virtue, the likeness of Almighty God."—"Roman and Teuton," Charles Kingsley, 1860.

[19] Athanasius Kircher, a Jesuit, wrote in 1659, two years after Harvey's death, that "the propagators of the plague are little worms, so small, fine, and delicate that they cannot be recognised by the senses." It was left for a Japanese bacteriologist, Kitasato, to discover in 1894 the bacillus specific to plague.

[20] This is no new idea, although it is necessary even now to emphasise it. It was clearly in the mind of Aristotle, as may be gathered from the following passage: *Φαίνεται μὲν γὰρ οὐδὲ τὴν ὑγίειαν οὕτως ἐπισκοπεῖν ὁ ἰατρός, ἀλλὰ τὴν ἀνθρώπου, μᾶλλον δ' ἴσως τὴν τοῦδε· καθ' ἕκαστον γὰρ ἰατρεύει*'—Nicomachean Ethics, I. 6, xvi.

[21] A passage in Harvey's Anatomical Exercise (lvii.) on the Generation of Animals affords a remarkable prevision on his part respecting the reaction of the bodily tissues to the intrusion of irritants. Referring to the effect of spider poison when introduced by a prick under the skin he wrote: "Erat tamen in cute quod discerneret, quippe eodem loco, ubi venenata punctio contigerat, subito sese in tuberculum contraxit, induitque mox ruborem, calorem, atque inflammationem, tanquam ad *pugnam* et nocentis mali expugnationem se roboraret et accingeret." What have we here but a forecast of the modern researches of Metchnikoff and others upon the action of phagocytes in inflammatory foci? The idea of a contest in the involved textures was, I think, singularly prophetic of the histological discoveries to be made some 230 years later and displays the intuition of Harvey in his study and interpretation of the secrets of Nature without any other aid than his simple vision.

[22] That this is not due to the fact that tuberculosis is a disease mainly of youth, while gout occurs chiefly in middle or later life, as has been alleged, is, I think, proved by the practical immunity of the children of gouty inheritance from strumous manifestations and tuberculosis. Senile struma is certainly recognised and blended conditions of gout and struma may be met with in advanced life.

[23] He wrote to Vlackveld of Harlem within a few weeks of his death: "There is no better way to advance the proper practice of medicine than to give our minds to the discovery of the usual law of nature by the careful investigation of rarer forms of disease."

of some pathologists and I propose to consider briefly some facts in relation to this condition. Koch's great discovery is supposed by many to have explained its pathogeny and to have laid to rest the old disputes respecting the connexion of struma and tuberculosis. In my opinion this matter is by no means disposed of solely on a bacteriological basis. The presence of a few tubercle bacilli in the lympharia may be a factor in a given case, but their presence does not explain all that we recognise as constituting the obvious condition of struma. Our predecessors took a wider view of the matter and we must still hold by some of their conceptions. The old belief was that scrofula—that is, an obvious manifestation of tuberculous disease—was a condition capable of transmission from parent to child. The indications of this state were then rightly determined, though now we interpret them differently, and were recognised by the ill-developed alar thorax, long, clumsy limbs, downy forehead and back, precocious intellect, and various other characteristics. But in 1846 Dr. Robert M. Glover pointed out that a careful distinction should be made between the predisposing constitution and the actual processes of strumous disease, between the *ens in potentia* and the *ens in actu*, and that thus such subjects widely diverged from health before tuberculous deposits took place.[24] This brings us to our view of the matter to-day, since we now believe that the heredity of scrofula means no more, but no less, than an inherited feebleness of bodily textures in which tuberculous bacilli are apt to thrive if they gain entrance at any point, a vulnerability of tissues affording little or no resistance to such an invasion. This diathetic condition or tissue-proclivity is what is transmitted, and it may be the outcome of long antecedent inheritance from an ancestry in which tuberculosis has from time to time manifested itself. We know that direct transmission of bacillary tuberculosis is possible, but that it is of the extremest rarity; also, that direct transmission of tubercle from patient to patient is possible, but very difficult of absolute proof. There is reason, too, for the belief that infection may occasionally spread from the impregnated air of certain dwelling-houses, leading to repeated cases amongst the occupants, provided they present the necessary degree of susceptibility.[25]

Our present point of view could never have been reached till we were made familiar with the infecting parasite which, as we believe, alone brings us in face of the *ens in actu*. Eighty-eight years ago Matthew Baillie, by naked-eye observation alone, fully recognised the fact that the caseous matter in the lympharia and in the lungs was identical and now we have the explanation of it. It has been suggested that the condition of struma is dependent on a latent state of tuberculosis. This idea must be discarded if we regard all tuberculous activity as due to bacillary influence. Yet another theory, recently advanced, deserves consideration, as it opens up a large question in bacteriology. It is urged that the condition of struma may be due to the presence in the body of tubercle bacilli in some early or pre-existing stage of development, which lead to other manifestations than those recognisable as tuberculosis. It is true that we have as yet but little knowledge respecting the exact biological position of the bacillus as commonly met with. In this condition it may possibly, as Woodhead and others suggest, merely represent one phase in the life-history of a higher fungus, allied to the actinomyces, which in certain stages of its existence leads a saprophytic life, its parasitic and pathogenetic phases being merely temporary. Without following up this suggestive hypothesis some support is added to the idea of latency, or of an unrecognised, spore-like (resting stage) condition of the tubercle bacillus by the fact that cases of tuberculous outbreak sometimes supervene when caseous structures or their vicinity suffer from injury and a consequent lowered vitality. This occurrence points to the general dissemination of microbes from some distant focus of long-past or forgotten disease, a development and migration, dependent, possibly, on some law of which we are at present ignorant. We have instances illustrating it in tuberculous meningitis following injuries to the head, in acute pulmonary tuberculosis following injuries to the testis, or to joints, once the site of tuberculosis, or supervening on operations for tuberculous anal fistula, while in cases of Addison's disease (adrenal tuberculosis) injuries to the spinal column are sometimes suspected as the primary exciting cause.[26]

In many of the enlarged lympharia of strumous persons neither tubercle bacilli nor caseous matter can be detected. This fact suggests that the tendency to react vigorously to irritants other than tuberculous is a specific factor and quality of the lymphatic system in strumous individuals. These swollen lympharia doubtless present a good soil wherein tubercle bacilli may lodge and induce caseation should they gain entry. This peculiarity of the lymphatic system in the strumous subject justifies us, in my opinion, in retaining in the old sense the term "strumous inflammation" without affixing to it, as we are now prone to do, the modern idea of tuberculosis. A strumous habit of body has doubtless a marked influence in modifying other morbid conditions which may occur in earlier or later life. The specific reaction to simple irritants, giving rise to strumous inflammation of lymphatic glands, which is common in youth, may sometimes remain in the adult and extend into advanced life, and the consequences of infections, as by scarlet fever, or syphilis, or of irritation by gout, may be, and probably are, greatly modified by this tendency, giving rise to varieties in the several manifestations of these diseases. Thus, gout appears to have a tendency to linger in strumous subjects and in its articular form to be attended with greater effusion than is commonly witnessed, while chronic tubal nephritis in such subjects is apt to be more than usually grave and uninfluenced by treatment. In short, the strumous diathesis is a bad one for the incidence of most morbid conditions. Guided by our present knowledge of this condition, and of its relation to tuberculosis, we have at once suggested to us the supreme value of preventive methods in the management of strumous persons, and a *methodus medendi* for those of them who may become tainted with tuberculosis—to wit, an aseptic environment, good food, tonic remedies, and the free removal by the surgeon of disordered lymphatic glands. The beneficial influence of sea air has long been recognised in these cases and it led over a century ago to the institution of an admirable hospital which, though its need and usefulness are as great as formerly, has somehow been suffered to languish for want of public appreciation and support. There is still a great need for small seaside hospitals to supply the requirements of poor patients, whether scrofulous or not, from this metropolis, and a grand sphere of beneficence in this direction lies open to wealthy persons who will found and endow such institutions.

Amongst the secrets wrested from nature in recent times is the discovery of the Roentgen rays, which have already proved of great practical use to surgeons for the detection in certain parts of foreign bodies and the exact determination of injuries to the skeleton. To the physician these scrutinising rays have as yet yielded little new information. Some varieties of renal calculi may sometimes be detected by them, but they afford no evidence of biliary concretions. We may, however, obtain indications of solid tumours and aneurysms, and of enlargement of certain viscera. The therapeutic influence of these rays, if any exists, is as yet not determined. According to Rieder of Munich, rays emitted from "hard," *i.e.*, high vacuum, tubes kill bacteria. Such rays have the highest penetrating power. With the assistance of my colleague, Dr. Lewis Jones, I have examined radioscopically the lungs of several patients with tuberculous disease in various stages. The physical signs were well-marked and readily detectable by ordinary methods of examination. The consolidated portions of the lungs gave no further evidence of their condition than a somewhat dark opacity, in mottled tracts, as compared with the luminous clearness of the unaffected parts. Pleural effusions and

[24] Fothergillian Prize Essay, p. 141. London, 1846.

[25] Harvey regarded phthisis as a contagious disease and placed it with leprosy, lues venerea, and plague as "creeping through the ranks of mortal men and by mere extrinsic contact exciting disease similar to itself in other bodies." He did not believe that actual contact was necessary, since a mere halitus or miasm sufficed to cause an "univocal" like itself.—"De Gen. Animalium," Exerc. xlix. Art. "Tuberculosis," Quarterly Medical Journal, April, 1898, by Dr. Norman Moore. (Address delivered before the Medical Society of Lincoln. 1895.) It has been surmised by Dr. Archdall Reid (quoted in Dr. Arthur Ransome's Essay, awarded the Parkes-Weber gold medal of this College in 1897) that in countries where tuberculosis has existed for many generations a certain tolerance has been secured whereby resistance to the microbe has been acquired and that the inhabitants escape the full influence of the disease. Native races of other countries have possibly, he thinks, not yet acquired this degree of immunity.

[26] Dr. Parkes Weber has recently directed attention to some cases of this kind.

pneumothorax are detectable, also pneumonic consolidations, and even early and limited areas of tuberculous deposit. In a recent report on this subject MM. Bouchard and Claude of Paris[27] declare that cavities can readily be discovered and even enlargements of bronchial lymph-glands.[28] The free movements of the diaphragm are well displayed and are worthy of study, since it is found that this structure is lowered on the affected side in cases of consolidation of the apex of the lung and rendered dense and immoveable in diaphragmatic pleurisy. The most startling revelation by means of the x rays is that of M. Kelsch, who declares that he discovered the existence of pulmonary tuberculosis in 51 out of 124 military patients who presented none of the ordinary signs of the malady. With respect to these observations I will only say that I desire more detailed evidence and, with it, confirmation.

It may be affirmed that radioscopy and skiagraphs tell but little to the physician that could not be ascertained by other methods of physical examination, but they certainly afford additional means for accurate clinical determination. Thus, in a case of mitral valvular disease with great cardiac hypertrophy which I examined the melon-shaped outline of the heart could be seen to bulk more largely in the thorax than the physical signs alone led one to believe. With improved apparatus we may come to better results than any yet attained, and, indeed, there may be other secrets in the domain of electrical science awaiting diligent research, of which perchance some may serve to revolutionise our present methods of clinical investigation.[29] Recent researches have been fruitful in respect of improved methods of vaccination and of securing the absolute purity of vaccine lymph. Our Milroy Lecturer of this year,[30] to whom is due the credit of the work, has made us fully aware of the steps by which the bacteriology of both human and calf lymph has been studied. The result has been the introduction of glycerinated calf vaccine lymph which now meets every requirement, whether demanded by the scientific bacteriologist, the medical practitioner, or the reasonable portion of the public. This discovery appears to me to open up new fields of study. The influence of glycerine in destroying some of the most noxious microbes which may gain access to ordinary vaccine lymph in various ways is very noteworthy and important, and I cannot but imagine that this agent may yet be found of more extended usefulness as a bactericide. It is surely significant that some of the most virulent germs, including those productive of tuberculosis and suppuration, should they contaminate vaccine lymph, can be completely disposed of by this simple medium within three or four weeks. We might have anticipated that such a discovery would have promptly disposed of most of the objections raised against the universal and compulsory practice of vaccination in England did we not know that ignorance and prejudice, fostered by misrepresentation and stimulated by paid agitation, require a strong hand for their repression. I speak advisedly of *repression* in a matter so vital as this, for there are varieties of ignorance and prejudice, some of which may safely be left for time and education to disperse. But here we are in face of a terrible danger with accredited succour at hand, and the *mens medica* has no hesitation as to the course to follow.

And, Sir, what I am now about to say I venture to say in my private capacity, not committing the College to the opinion, although I know that it is shared by the majority of those whom I have the honour of addressing. I refer to the recent Parliamentary treatment of the Vaccination Bill and I make bold to stigmatise it as a piece of panic legislation, a lamentable concession to ignorance, fraught with serious peril to the whole community, and unworthy of the duty and dignity of any British Government. By many of us the report of the Royal Commission on Vaccination was considered by no means too strong, but, alas, it has been left to the countrymen of Edward Jenner, by sanction of what has well been termed "a tremendous experiment," to place England, hitherto foremost in State medicine, in a humiliating position before the world. Let us try to imagine today the contempt our Harvey would have felt for the men who so treated the revelations of truth sought out from nature. Of Harvey's skill as a practical physician we have little actual knowledge. This is mainly owing to the loss by robbery and destruction of his papers, including what must undoubtedly have been a storehouse of wisdom, his "Medical Observations," to which he occasionally makes allusion in various treatises. Our art is not improbably the poorer to-day for this untoward circumstance. We know that his "therapeutique way" did not commend itself to the practitioners of his time, but we may fairly believe that his natural powers of insight, quickened by constant and accurate biological studies, suggested to him methods of treatment which his contemporaries, still held in the bondage of dogma and routine, failed to comprehend. We may, however, form an opinion as to his clinical sagacity from the following sentence taken from his second "Disquisition on the Circulation of the Blood," written to Jean Riolan: "How speedily is pain relieved or removed by the detraction of blood, the application of cupping-glasses, or the compression of the artery which leads to a part? It sometimes vanishes as if by magic." And then he proceeds: "But these are topics that I must refer to my 'Medical Observations' where they will be found exposed at length and explained." These facts are assuredly as true to-day as they were 250 years ago, but I will venture to say that they are not adequately recognised in practice at the present time, and that in consequence some of our patients do not receive the prompt measures of relief which are available for them. The fierce controversies which have raged in this century on the subject of blood-letting have had for their result a serious neglect of its appropriate application. Guided by modern physiology with its teaching in regard to the physics of the circulation, no less than by our larger knowledge of morbid conditions, we have now a full warrant for the judicious employment of a practice which has always commanded the assent of the best clinical observers.

I have barely alluded to the scientific achievements of Harvey's long life. The full scope of his original discoveries is possibly even now imperfectly realised by those who connect his name merely with the doctrine of the circulation of the blood.[31] Yet this discovery was but the final exposition of a fact, only disclosed to him after assiduous anatomical labour, directed and pondered over by his surpassing intellect. The steps which led to it slowly elicited, not only the mechanism of the circular course of the blood, but the important fact previously unknown that this fluid was uniformly diffused and common to all the blood-vessels of the body.[32] Harvey, moreover, was the first to interpret correctly the physiology of the heart. His great work on "Animal Generation," of which he was so diffident and which was, as it were, dragged from him by his admiring friend, Sir George Ent, for the purpose of publication, would by itself have raised him to the first rank of biologists, although, as Willis remarks, to complete and perfect such a task as this was impossible even for Harvey with the means at his disposal in the seventeenth century. His minor treatises show, equally with his greater ones, the same originality and intellectual power. But I will not dilate on these topics, they have been often discussed before us here. I have preferred on this occasion rather to present to you the pre-eminent qualities of the mind and character of Harvey and to indicate the wholesome lessons which they afford for us. Harvey himself best summed up his great characteristic and guiding principle in a concise sentence which might even now be fitly inscribed on his sarcophagus, and it is this: "I avow myself the partisan of truth alone." That was the great moral of his life—truth eternal, ever to be sought for, to be held and to be passed on. Let us ask ourselves if the orator of 1998 will be able to say that such was our ideal in this College at the close of the preceding century? We may fairly hope that he will not hesitate so to speak of us. In my belief nothing will better tend to foster and maintain such a standard amongst us than the disclosure year by year

[27] Congress for the Study of Tuberculosis, Paris, July, 1898.

[28] These observations have been quite lately confirmed by Dr. Hugh Walsham at St. Bartholomew's Hospital. (See THE LANCET, Oct. 15th, 1898, p. 988.—ED. L.)

[29] "Nor do I doubt but that many things still lie hidden in Democritus's well that are destined to be drawn up into day by the ceaseless industry of coming ages." (Letter to John Daniel Horst, Principal Physician of Hesse-Darmstadt. Harvey, 1654.)

[30] Dr. Sydney Monckton Copeman, a Member of this College.

[31] "The old humoral pathology has lost its roots since Harvey showed that the blood is a circulating fluid and not a parenchymatous juice."—Professor Virchow. (Address delivered at the Tercentenary Festival of the University of Edinburgh. 1884.)

[32] I remember that my esteemed teacher, Professor Goodsir, of Edinburgh, was wont to describe the blood as an organ. His successor, Sir William Turner, has confirmed my recollection and writes to me as follows: "Goodsir regarded the blood as an organ and the blood corpuscles as the tissues of the organ. His mind was so full of the importance of the cell as a force in nutrition that to him the collective cells of the blood represented an organ, although they were not fixed in their place, but moved with the blood-stream. His conception was, I believe, a true one."

in this place of the character and works of our immortal Harvey. To have had him, to be summoned regularly to peer into his great mind, to learn his methods, to be counselled by his wisdom, and to participate in the benefactions he so affectionately designed for us, constitutes, indeed, a high responsibility of which we must ever feel sensible in this his beloved College.

I have now, lastly, in accordance with Harvey's direction, "to exhort the Fellows and Members for the honour of the profession to continue in mutual love and affection among themselves, without which neither the dignity of the College can be maintained nor yet particular men receive that benefit by their admission into the College which they might expect, ever remembering that *concordia res parvae crescunt, discordia magnae dilabuntur*." According to Willis, "every act of Harvey's public life that has come down to us is marked not merely by propriety but by grace." I venture to think that we in this College are well knit together in mutual regard and sympathy and thus maintain in these respects what Harvey desired should ever exist here. The concord which we enjoy truly preserves our dignity, for it adds weight to our deliberations and our efforts. It is a good deal the fashion in these days to deride dignity and its symbols, but wise men in all times have realised the risk which the loss of them entails, and have had cause to learn that when the symbol is dropped the reality also is only too apt to disappear. But our life work as the physicians of England is not done here. Our duties take us to serious and responsible ministrations to all classes of our countrymen. Our various positions demand that, with perfect freedom and independence, we bring our best knowledge and influence to bear on all human interests. May we indeed be careful to carry with us in all the relations of life, professional and otherwise, the tone and bearing which are demanded of all who belong to this College. May we strive to be like-minded with those whose memory we have just praised, and, not least, with the simple, unselfish, Christian gentleman before whose life work and beautiful character we have once more bent to-day in solemn admiration.

A Post-Graduate Lecture
ON
CORNEAL ULCERS AND THEIR TREATMENT.

Delivered at the West London Post-Graduate College on July 16th, 1898,

BY PERCY DUNN, F.R.C.S. ENG.,
OPHTHALMIC SURGEON TO THE WEST LONDON HOSPITAL.

GENTLEMEN,—One of the commonest forms of disease met with among ophthalmic out-patients is that of ulceration of the cornea, but despite the frequency with which it occurs it should never be lightly regarded inasmuch as it constitutes a most fertile source of diminution of vision among the poorer classes. Ulcers of the cornea, speaking generally, are an indication of malnutrition; that is to say, the patients, both children and adults, are either suffering from the effects of overwork and under-feeding or they are markedly anæmic from some other cause. It is this depression of vitality which explains the occurrence of ulcerationof the cornea after certain of the exanthemata, such as measles, scarlet fever, and small-pox; in fact, anything which lowers the general health is prone to be followed by corneal ulceration. In curious contrast, however, with the frequency of this disease among the poor is its absence among the better classes. In private practice ulcer of the cornea is a very rare affection. Sometimes, of course, it occurs, and in this connexion I recollect a well-known surgeon telling me that during his student days he read with so much assiduity for his examinations that he at length developed an ulcer on each cornea. On the other hand, traumatic ulcers of the cornea are not infrequently seen in private practice. Only recently a gentleman was sent to me with an ulcer of this kind caused by the branch of a thorn bush. He was passing through a hedge carrying his gun when the branch suddenly flew back and struck his right cornea. The ulcer soon healed and left a barely perceptible opacity. But shortly after this he came to see me one evening with the following curious history. While dressing for dinner he somehow succeeded in injuring his left eye with the sharp edge of his shirt front, which caused him much pain. On examination there was a small abrasion of his cornea. The pain, however, was soon relieved by a few instillations of cocaine and atropine and he was able to fulfil his engagement without much discomfort.

The clinical aspects of corneal ulcers may be dealt with so far as their immediate and remote effects are concerned. Let me refer to the latter first. Inasmuch as ulceration of the cornea involves a loss of corneal tissue it necessarily follows that the process of repair must result in the formation of an opacity and the extent to which the opacity interferes with the vision mostly depends upon that part of the structure on which it is situated. If the ulceration has been marginal no loss of vision ensues, but the closer it has approached the centre—that is, the pupillary area—the greater is the interference with the sight. Sometimes it is curious to note the declension of vision associated with opacity of the cornea. A patient may come complaining of imperfect sight and on testing the vision by the distant types we find that no glass improves; then it remains for the examination with oblique illumination to reveal the cause. A faint though perfectly definite central cornea haze is found which at the time of the first examination was not apparent.

In discussing the next question—namely, that of the immediate effects of corneal ulcers—the first point to consider is the causation of the lesion, and here I think that it is quite unnecessary to embark upon an elaborate classification. The more simple one can be the better, for, after all, whatever the etiology may be the main thing is the treatment, and this, except in complicated cases, does not vary much in the majority of instances. For all practical purposes, then, corneal ulcers may be divided into (1) traumatic, (2) simple, and (3) complicated. I have assigned to the traumatic variety a distinct class inasmuch as the primary treatment which they demand differs from that of the rest. The essential detail to bear in mind with regard to traumatic ulcers is that they may be, and commonly are, infected with pathogenic micro-organisms at the time of the receipt of the injury. Clearly, therefore, it is wise to treat them antiseptically from the beginning and apply to them those principles of cleanliness such as regulate the treatment of traumatic lesions elsewhere in the body. If the ulcer has resulted from a foreign body or a scratch or from some similar cause cocaine should be instilled into the conjunctival sac and afterwards a warm chinosol solution (1 in 2000) should be douched over the eye until thorough cleansing has been secured. Atropine drops (of the strength of 2 gr. to an ounce of water) may then be instilled and a pad of chinosol gauze applied and secured with a bandage. The drops may be used night and morning and the sac washed with chinosol solution at the same time until the eye is well. Perhaps the most serious examples of traumatic ulcer which I have seen have been those in which the cornea has been scratched by the finger nail. Infants sometimes inflict this injury upon their mothers, but in one case under my care an elderly man came to the hospital whose story was that his eye had been accidentally scratched by his landlady. On examination there was a large ulcer of the left cornea in the lower and outer quadrant, and commencing hypopion. Eserine drops (½ gr. to an ounce of water) were ordered, but the case was not then treated antiseptically and only hot poppy fomentations were ordered. He was told to return in two days. At that time I found that he was complaining of much pain, the ulcer was decidedly larger and partially sloughing, and the anterior chamber was full of pus. He was admitted into the hospital; I then made a small incision through the cornea from below with a Graefe's knife and evacuated the pus from the anterior chamber, hot boric acid fomentations were applied and the eserine was continued. Under this treatment improvement quickly began and in about a week's time he was able to leave the hospital with the ulcer nearly healed. The explanation of the infectivity of these cases presumably is that the nail while inflicting a wound on the corneal surface affords the opportunity to the pathogenic micro-organisms collected under its free edge to inoculate the lesion. It is evident, then, that these and other traumatic ulcers demand careful antiseptic treatment

from the first in view of the trouble arising from their liability to septic infection.

Simple ulcers of the cornea may be described as those in which the ulceration is unaccompanied by any distinguishing feature, such as vascularity, hypopion, sloughing, &c. This form of ulcer is most commonly seen among weakly school-children. Perhaps the most troublesome symptom associated with it is photophobia, which, however, is very variable in degree. Sometimes the intolerance of light may be extensive; on the other hand, there may be very little or hardly any to speak of. At any rate, the size of the ulcer bears no relation to the intensity of the photophobia. In young children, for example, in whom acute blepharospasm has been present for some days, careful examination of the cornea under an anæsthetic may disclose an ulcer not larger than the head of a pin. Again, these simple ulcers are seen in connexion with phlyctenular ophthalmia. They are generally superficial and after healing scarcely leave any opacity in the majority of cases. Their treatment is quite simple. If much photophobia be present cocaine and atropine drops may be used twice a day and the eye at the same time bathed with warm water. A shade should also be worn with a thin layer of cotton-wool under it in order to exert some pressure upon the closed upper lid, thus keeping the eye in a condition of physiological rest. Internally a tonic should be given, nothing being so efficacious as a preparation of iron; the tincture of the perchloride with glycerine answers admirably. If the photophobia be not troublesome some atropine drops (2 gr. to an ounce of water) may alone be used, and it is useful to bear in mind that their instillation should be continued until all injection of the globe has subsided. Afterwards some dilute yellow ointment may be placed in the conjunctival sac every night at bed-time as a stimulant to the processes of repair. In the majority of cases this treatment amply suffices to effect a cure. But it is useless to expect a good result if the child be permitted to attend school. All school work should be interdicted until the eye has made a good recovery.

Complicated ulcers may be divided into the sloughing, vascular, and infective varieties. Any ulcer of the cornea may pass into a sloughing condition and when this occurs the cause is due to pathogenic infection. One of the sources of such infection is stated—and repeated—in text-books to be chronic dacryocystitis; the condition, therefore, of the lacrymal passages should always be examined into in these cases. Sloughing ulcers are not infrequently seen during lactation in weakly young women, whose anæmic, underfed condition altogether unfits them for continuing the duties of nursing their offspring. In bad cases the ulcers may be multiple and both eyes may be involved, and inasmuch as the ulceration extends into the deeper layers of the cornea perforation with prolapse of the iris may supervene and add still further to the seriousness of the destructive effects of the disease.

Coming to the question of treatment I have repeatedly found that sloughing ulcers of the cornea are best treated from the first with eserine. The strength of this drug which I use is half a grain to an ounce of sterilised water and this I never exceed. With drops of such strength no irritation is caused, while the full benefit of the drug is obtained. Practically the effect of the drops can be regulated by the frequency of their instillation. Speaking generally, two instillations a day will be found to be sufficient, but if more are considered to be advisable these can be administered without fear of pain or irritation being induced. I shall refer to this use of eserine more fully later. Again, heat in the form of hot fomentations is absolutely needful; nothing so effectually relieves the oftentimes acute pain accompanying these ulcers. The cornea likes warmth. A large pad of chinosol gauze dipped into boiling water and wrung dry should be placed over the lids of the affected eye and the applications continued for half an hour or more twice or thrice a day. A few words may now be said regarding hot fomentations. It should be remembered that belladonna in this form is best avoided. For example, belladonna fomentations are contraindicated when the eye is under the influence of eserine, for the one drug would counteract or neutralise the effects of the other. Again, it is inexpedient to use belladonna when the eye is under the influence of atropine, for the combination of the two is apt to cause atropine irritation. Lastly, a fomentation is not usually intended for the application of a drug, but as a means for the employment of heat; hence if any drug be used it is best to employ some antiseptic, as chinosol, by which the conjunctival sac will be kept as far as possible in an aseptic condition and the repair of the ulcer more directly promoted. In addition to the local treatment the patient should have good food in abundance, as well as a preparation, say, of quinine and iron, while it is very needful to remember that in bad cases occurring in connexion with lactation the weaning of the infant becomes an essential element of treatment.

A vascular ulcer is distinguished by a leash of vessels, presumably of repair, running from the conjunctival margin across the cornea to the lesion. These vessels while coursing over the cornea naturally disturb the nutrition of the epithelium beneath them and thus opacity is often the result. The opacity so remaining has been compared to a "snail track," the mark, that is, which a common or garden snail leaves in its course while moving about at night. These ulcers are generally chronic and in earlier days were regarded as very intractable to treatment. All local treatment not infrequently failed to cure them, and then there was only one other method left, which, however, seldom failed to be successful. I allude to the use of a seton. But it is now some years since I resorted to this practice. Indeed, the mere idea of such a method is repulsive in these days of aseptic non-suppurating wounds. How can any surgeon whose faith is firm in Listerism voluntarily bring himself to inflict a wound with the deliberate intention of providing for its continuous suppuration. Still, such is the effect of a seton. The more loathsome-looking the septic silk of which it was composed became and the freer it was bathed in pus the more efficient was its action supposed to be. Every time that the surgeon dragged the seton to and fro in its fistulous track, as was the custom, he introduced a fresh supply of septic matter and thus added to the suppuration. I do not know to what extent this loathsome method is still resorted to, but for the credit of our art the hope may be expressed that it has metaphorically been relegated to the lumber room of obsolete remedies where it may be allowed to remain and be forgotten. Vascular ulcers, as I have for some years repeatedly proved, are readily amenable to treatment with eserine. A short time after I first adopted this method I was asked by the then medical superintendent of one of the metropolitan Poor-law infirmaries to see a case of vascular ulcer in one of the patients under his care. The ulcer had resisted treatment for a long time and all kinds of local remedies had been tried but had failed. Nevertheless, a seton had not been used nor had eserine. However, I recommended the latter and in a short time afterwards I heard that the case was well.

The infective ulcer of the cornea, commonly called the serpiginous, is a form of ulceration which tends to spread over the surface of that structure with an infective edge suggestive of the course pursued by phagedæna of the skin which used to be seen not infrequently some years ago. The disease is very destructive and in the majority of cases calls for vigorous treatment. Commonly it has a crescentic outline and begins at the corneal margin. The corneal tissue surrounding the ulcer may or may not appear infiltrated. The progress of the disease is strongly suggestive of its micro-organic origin and it is now believed to be due to a specific diplococcus. Much pain, photophobia, and injection of the globe usually accompany this form of ulceration, and the patients are mostly men of middle age. In advanced cases hypopion, perforation, and much destruction of the corneal tissue may ensue, leaving the patient with an irretrievably damaged organ. If seen early the disease may be arrested by treatment and a good result obtained before much damage has been done. Recognising therefore its infective nature the best plan is to treat the ulcer antiseptically from the first. Cocaine having been instilled a warm chinosol solution (1 in 2000) should be allowed to play over the surface of the ulcer and the conjunctival sac thoroughly irrigated. Then eserine drops should be instilled and afterwards finely pulverised iodoform may be dusted over the corneal surface. Lastly, some chinosol ointment should be smeared over the margins of the closed lids and a pad of chinosol gauze and a bandage applied. If after trial these measures fail and it is evident that the ulcer is spreading then the following plan must be resorted to. The eye having been cocainised a drop of a solution of fluorescin must be instilled; the area of the ulceration will then appear as a bright green surface. To the surface thus delineated the actual cautery must be applied, the margins being especially dealt with. When

healing satisfactorily follows this treatment much opacity of course remains. Among out-patients these infective ulcers are, perhaps, the least common, but they are said to occur with frequency among agricultural labourers, especially during harvest time.

In the foregoing remarks it will have been observed that I have more especially referred to two drugs—namely, chinosol and eserine—and about each of these I now propose to add some further details. With regard to chinosol, concerning the advantages of which I have been repeatedly asked, I believe it to be the best antiseptic agent which is now in the market, and the longer I use it the more I prefer it and the closer does it seem to me to fulfil the requirements of an ideal preparation of the kind. There are certain reasons for doubting whether in ophthalmic surgery the principles of antisepticism are followed in the present day to the extent which their importance demands, and it is probable that the want of precision in this regard is partly due to the fact that among the multiplicity of antiseptic agents there is none which has actually found general favour with ophthalmic surgeons. The perchloride of mercury, carbolic acid, boric acid, each has its drawbacks. Each is undoubtedly useful in its way, but neither the one nor the other has ever excited sufficient enthusiasm to cause thorough antiseptic principles to prevail in the domain of ophthalmology. The importance of this matter I believe to be such that I hold sympathetic ophthalmia would be an impossible complication in eye surgery were a wound of the ciliary region to be treated from the first with every antiseptic precaution. In fulfilment of this belief I have treated within the past year several severe wounds in the dangerous zone, and in each case the eye made an excellent recovery. The results I attributed to the systematic antisepticism practised by means of chinosol. The chemical name of this drug is potassium oxyquinoline sulphonate and one of its chief advantages is the potency of its germicidal action—a fact which has been incontestably proved by bacteriological investigation. In addition, it is freely soluble in water and thus is handy for use. Moreover, it is non-caustic, does not injure the skin of the hands, does not coagulate albumin, and is non-hygroscopic. Again, it is one of the most economical preparations in the market, for owing to its potency only weak solutions of the drug are necessary. Mixed with 1 in 20 of boric acid it forms an admirable antiseptic ointment. It might, perhaps, seem that in saying all this I am praising chinosol inordinately. The fact, however, is that a lengthened experience has taught me that it is an excellent preparation, possessing advantages which in time must commend it to every operating surgeon. With respect to eserine, there is some unanimity of opinion among the authors of modern text-books on ophthalmic surgery that the drug should be avoided in the treatment of corneal ulcers. But my experience, as will have been gathered, does not accord with that view. On the other hand, I believe that the feeling which prevails against eserine in this connexion has arisen in consequence of misconception regarding its use. The great point to remember is to use it in a weak solution. The evil repute of the drug has been mainly gained by employing solutions of greater strength than were necessary. Formerly eserine drops of the strength of four grains to an ounce of water used frequently to be prescribed, and then troublesome symptoms were nearly always induced. But it is seldom, if ever, necessary to resort to a higher strength than half-a-grain to an ounce solution, and for continuous instillation in cases of chronic glaucoma even a less strength than this may be satisfactorily employed. Experience has fully demonstrated that there are certain forms of ulceration of the cornea which atropine fails to benefit but which, on the other hand, readily yield to eserine. To define what these particular forms are is a question which has been repeatedly asked in my out-patient room and the answer may here be given as follows: all sloughing, infective and vascular ulcers are best treated with eserine as well as, of course, those situated at the corneal margin at which perforation is threatening. This may be regarded as a broad rule for guidance, but there remain other cases concerning which no rule can be expressed in words. I have in my mind those cases of simple ulcer in which atropine has been used and apparently failed. In many of such I have found eserine to act like a charm, the injection of the globe quickly clearing up in consequence and the ulcer rapidly beginning to show improvement. A typical case may here be mentioned. A short time ago a man wearing a shade was led in to my out-patient room by his wife. The history was that he had been under treatment at an ophthalmic hospital for five weeks. There was a superficial central ulcer of each cornea with photophobia and some injection of the globes. The pupils were widely dilated from atropine. This seemed to be a case in which eserine was clearly indicated. Accordingly eserine drops (½ gr. to an ounce of water) were ordered to be instilled twice a day. At the end of the week when the patient again presented himself the improvement was very manifest. Two days after using the drops the patient discarded the shade and the photophobia had gone as well as the injection of the globes. Before the end of another week he had returned to his work. Undoubtedly in cases where photophobia is troublesome eserine is of service by contracting the pupil and cutting off light to the eye, while atropine increases the trouble by dilating the pupil, thus placing the patient with his damaged cornea in a helpless condition in the presence of light beyond a low degree. It is quite possible that the utility of eserine in the treatment of corneal ulcers is partly due to the fact that the drug reduces the tension of the globe. This is only a reasonable assumption when we recollect that atropine tends to raise the tension and that an eye in which increased tension has occurred is not one in which healthy nutrition is likely to be present. By lowering the tension, then, in these cases just the difference may be made in securing the establishment of those nutritional changes necessary for the complete repair of the ulcers.

A CONTRIBUTION TO THE PATHOLOGY OF INFECTION BY THE PNEUMOCOCCUS.

BY W. H. BRODIE, M.D. ABERD.,
W. G. ROGERS, M.D., M.S. LOND.,
AND
E. T. E. HAMILTON, M.D., M.S. LOND., F.R.C.S. ENG., B.SC.

IN 1894, in a paper read before the Transvaal Medical Society under the title of "Acute Specific Rhinitis," we communicated the result of an investigation we had made on an epidemic which had occurred amongst the Kaffirs employed in one of the mines here. At least 100 cases came under our notice. These were mostly of a mild form; many, however, were severe; and out of 15 deaths we were able to perform 9 post-mortem examinations. The salient features of the disease were purulent discharge from the nostrils and, in a large majority of the cases, pneumonia. Our special attention was first drawn to this epidemic by the sudden and unexpected deaths, unaccounted for by any premonitory constitutional disturbance or signs of sufficient local disease, even when pneumonia was present.

In order to lead up to our recent work a recapitulation of our previous inquiry is desirable. A summary of the post-mortem examinations is as follows. In 1 case we found purulent meningitis and pneumonia, with a large quantity of pus bathing the mucous membrane of the nasal cavities and filling the sinuses and ethmoidal cells. This Kaffir had worked seemingly well on the day of his death; he was quite conscious and could articulate up to within a few hours of his death. In 2 cases we found meningitis without pneumonia, with a small quantity of pus in the nasal regions and sinuses. One of these patients had worked on the day of his death; the other had only complained of feeling ill for a day or two. In 2 other cases there was pneumonia without meningitis and a very large quantity of pus in the nasal sinuses and fossæ. In 1 there was slight pneumonia without meningitis and nowhere was there pus formation. This Kaffir had complained of pain in the head and loins for three days before he was seen; twelve hours before death he showed great constitutional disturbance. His temperature was 104° F. and his pulse was 130. He was sensible. Incessant vomiting set in and he gradually became comatose and there was incontinence of urine and fæces. We expected to find cerebral lesions, but they were absent. In one case we found neither meningitis nor pneumonia, and in this case again the constitutional disturbance was grave; the patient had lain unconscious for three days with incessant vomiting. In all the above

necropsies we found one condition present—a livid, injected, swollen condition of pituitary membrane. One especially interesting post-mortem examination was made. This was on the emaciated corpse of a Basuto, aged about forty-five years, who had been sent to hospital suffering from double pneumonia. He had had purulent nasal discharge and injected and livid-coloured mucous membrane over the turbinate bones. The double pneumonia was extensive, but the constitutional disturbance was slight in comparison. The temperature fell to normal on the eighth day. Sixteen days after admission he had a severe attack of dysentery which lasted about a week. When discharged a month after admission he was well except that dulness persisted over the bases of the lungs. He died a month after leaving hospital; the immediate cause of death was epistaxis. At the post-mortem examination some recent pneumonia was found at the apices, also some old consolidation going on to gangrene, but the condition of the nasal cavities chiefly arrested attention. The whole of the diseased mucous membrane had exfoliated in the form of sloughs, leaving a pallid surface; the mucous membrane of the sinuses was pale and thin, and parts of the ethmoidal cells were denuded of mucous membrane and periosteum. The apertures were remarkably patent. In one or two places the sloughs still adhered, with petechiæ in their neighbourhood. We sent 9 cases to hospital; all of the patients had red and turgid mucous membrane of the nose with more or less discharge and increased temperature; 6 had pneumonia with an abundant fine frothy expectoration—in one case four pints in twenty-four hours; 2 had no pneumonia. Jaundice was a marked feature in some of the cases and it was present in 2 at the post-mortem examinations. There was no evidence of disease of the nervous system in any of the hospital cases and they all recovered except the one case already alluded to. None of them had great constitutional disturbance, not even those with severe pneumonia. From a study of this epidemic we came to the conclusion that it was the result of a poison circulating in the blood, infecting first the nasal region and causing death by the toxæmic state which it produced, the meningitis and pneumonia being secondary and accidental—the result of the poison circulating in the blood.

Since the occurrence of that epidemic we have had many sporadic cases and have performed several necropsies, meeting the same characteristics, but there had been no serious outbreak until about six months ago, when the increased working of the mine demanded a large number of fresh hands. During the last four months about 800 raw Kaffirs came in batches into a new, commodious, and well-cared-for compound and among these new arrivals another epidemic occurred. They were nearly all of poor physique and came from the neighbourhood of Inhambane on the east coast, 100 miles north of Delagoa Bay, thence by train four days to Johannesburg, including a day's stoppage at the border to obtain passes. They suffered severely from sea-sickness and according to their report began to get ill with coughs on leaving the steamer. The winter had been exceedingly cold and they must have suffered severely from the low temperature, travelling insufficiently clad from the sea-coast to this high altitude. In fact, the only protection each had against it was a cotton handkerchief. Like their fathers for generations, at home they did no work, living on wild vegetables, sugar-cane, plantains, and occasionally the flesh of wild pigs and a little milk. After a short but trying journey they arrived from a warm and comparatively moist sea climate to this high, dry, and cold one to work in a mine 1000 ft. below the surface, their diet consisting of an unlimited quantity of mealie meal varied with fresh meat, and a supply of lime-juice. Their powers of resisting disease must have been considerably weakened by this sudden change in their habits, diet, and surroundings. A large majority on arrival were suffering from nasal catarrh and coughs, with pneumonia in one or two cases, but whether this was due to the specific organism infecting them before arrival or only acting as one factor in predisposing them to the attack here we have not yet been able to determine. During the months of June and July, the coldest months, the average number off work was about 100. They appeared to be suffering from ordinary colds complicated in various cases with pneumonia, dysentery, diarrhœa, parotitis, and in two cases with meningeal symptoms. Out of the total number of sick 40 died, and we were able to obtain 17 post-mortem examinations One batch of 93 emaciated Kaffirs arrived in the beginning of July, when the temperature, except for a few hours during the day, persisted below freezing point; a fortnight later only 16 were working and some of them were ailing. Altogether of this batch 8 died. Owing to our being now able to pursue our study into the bacteriology of the disease we have advanced a large step towards its elucidation, and although we were unable to make bacteriological examinations in the first epidemic a comparison of the clinical and pathological characteristics of the two outbreaks leaves no doubt that they were due to the same cause. The only differences were that in the first epidemic there were several cases of jaundice and only 1 with dysentery, and this only exemplifies what we wish to emphasise—i.e., how protean the manifestations of the disease are. At first sight it was natural to suppose that the various cases of pneumonia, dysentery, parotitis, diarrhœa, and spinal meningitis were distinct and independent illnesses brought on according to the idiosyncrasy of the individual by his being unable to withstand the new conditions of life. We performed post-mortem examinations on cases in which each of the above conditions was the immediate cause of death and the pathological and bacteriological examinations proved that we were dealing with only one disease. In our former paper we gave each case in detail, its history and clinical features, as far as we were able to observe them, and the post-mortem appearances, showing the charts with notes of the cases treated in the hospital. We think it superfluous, even if space allowed, to describe *seriatim* each of the numerous cases of the later epidemic. We shall therefore only enumerate the various symptoms.

The most prominent symptoms were nasal catarrh and coughs. The compound was sonorous with coughing. This was unaccompanied by signs of bronchitis or lobular pneumonia, but in a great many cases, even when the men were at work, it was associated with lobar pneumonia. Although all cases of nasal catarrh may not have been specific, yet as a diseased condition of the mucous membrane of the nose was found in all the necropsies it is fair to assume that the large majority were due to specific rhinitis. The same can be said of the pneumonias. In nearly all the necropsies pneumonia was found and proved to be of specific origin; there can therefore be little doubt that the majority, if not all, of the cases were due to the same cause. Indeed, to reason otherwise would mean that the disease we are considering is invariably fatal—that only the 40 dead were attacked by this specific organism. The mere presence of pneumonia was not a dangerous symptom. In the large majority of cases in which it was present it involved only a small part of the lung, generally at the bases, and the Kaffirs contentedly worked with lungs in this condition. In cases in which the lungs were extensively invaded recovery took place and only in one necropsy was the pneumonia found of sufficient extent to account for death. There was always coexisting pleurisy. Parotitis was a common symptom, but, like pneumonia, was not a guide to prognosis. Diarrhœa, not noted in the previous epidemic, was prevalent. It was not of a severe form, but it was of serious import, because in some of the cases the motions gradually assumed a dysenteric character and in all of the cases in which there was dysentery which came under our notice the patients died. In the great majority of the fatal cases dysentery was the immediate cause. A characteristic of this phase of the disease was that the evacuations towards the end of the illness became entirely hæmorrhagic, mostly dark-coloured, sometimes black, and simulating the motions found in purpura hæmorrhagica. When they were of this nature they were passed involuntarily. No treatment was of avail in lessening or modifying the discharge. The following case shows that when dysentery is the pronounced symptom there is a tendency to hæmorrhage in other organs.

A Kaffir had worked for two weeks after arrival without complaining of feeling ill; he then came into the mine hospital seemingly suffering from ordinary dysentery. A few days after admission dulness with tubular breathing developed at the bases of the lungs, but there was never a large area involved. He was never heard coughing or seen expectorating. The motions, at first of the usual dysenteric type, gradually became hæmorrhagic and twelve hours before death he was passing involuntarily large quantities of very dark-coloured blood. He had no signs of disease of the nervous system. At the post-mortem examination the mucous membrane of the nose was found to be less altered than usual. Parts of the lung at the bases had red hepatisation. An abscess in

the wall of the sphenoidal sinus, pus in other sinuses, and hæmorrhagic cerebral effusion were found. Considered as a symptom of the disease, cerebral meningitis could almost be excluded. We had only two cases with well-marked signs of meningeal mischief and in both spinal meningitis was found post mortem. This latency is remarkable when we think of the number of cases in which we found extensive purulent cerebral meningitis at the necropsies; it was almost as often found as pneumonia.

We suggested in our former paper that the brain of the uncivilised Kaffir may be less responsive to disease than that of the white man, but the lung mischief showed the same latency; we only knew of its presence in most cases because it was easily discoverable by physical examination. It has yet to be decided whether this latency is due to a peculiarity of the disease or of the individual. Before entering into the pathology and bacteriology we will draw attention to a case which illustrates the latency of the meningitis and how easy it is to miss the diagnosis of the disease.

A Kaffir was absent from work for two weeks suffering from painful swollen legs; he was only seen two days before death and then only perfunctorily examined. Scorbutus was suspected. He never appeared very ill and an hour before death he was seen sitting before the fire joining with animation in a conversation. He must have then methodically rolled himself in his blanket near the fire, for he was found dead in this condition. He had died quietly. At the post-mortem examination the femoral veins were full of thrombi. There were general purulent cerebral meningitis, slight pneumonia, and the usual condition of pituitary mucous membrane.

Another case illustrating the acutely toxic nature of the disease was that of a fine Kaffir who had only been in the compound a week. He had not been working. For two days before death he had complained to his friends of feeling sick, but on the day preceding his death he said he was better and announced his intention of going to work on the morrow. He was found dead in the middle of the night. The following is from the notes of the post-mortem examination made ten hours after the death. The face was swollen. There was emphysematous crepitation along the course of the large veins. There was a bloody nasal flux. The nasal mucous membrane was swollen and livid. There were from seven to eight ounces of hæmorrhagic pericardial effusion almost black. Red hepatisation was present at the upper part of the lower lobe of the left lung; there was no consolidation of the right lung. There was recent pleurisy on both sides. The spleen was enlarged and very soft. The muscles showed marked post-mortem staining; the blood was tarry throughout the body. There was neither jaundice nor meningitis. The bacteriological examination in the three cases cited showed that they were the result of acute general infection by the pneumococcus.

Morbid anatomy.—The 26 necropsies made in the course of our investigations were in all cases commenced by sagittal section of the skull. The thoracic and abdominal viscera were examined in every case, and the spinal cord in 5 cases. The morbid conditions observed were noted at the time of examination and the present account is a *résumé* of those notes. The necropsies were made as soon as possible after death and in many cases the bodies were still warm. Many of the examinations had to be conducted within the walls of a mine compound and it is of some psychological interest to record the fact that the Kaffirs viewed our operations with favour, pleased with the idea that we were seeking "strong medicines" to heal them in their sickness, which, indeed, was ultimately if not primarily true. Their own habit is in accordance with this conceit, for they are accustomed to lay under tribute to this end the lions or other large game which they succeed in killing in their native districts. They subsequently, however, resented our taking organs for preservation from emaciated subjects.

In all the cases after death we observed a greenish, thick, purulent discharge coming from the nostrils. In many cases emission of semen had occurred about the time of death. The nasal mucosa, including that of the adjacent sinuses, showed every stage of inflammation. We found œdema, hyperæmia with purple colouration, purulent infiltration, and ulceration. In more chronic cases there was atrophy to such an extent that the tissue was pallid and the various apertures leading from the nasal fossæ were abnormally patent. This appearance was specially marked at the orifices of the Eustachian tubes, the margins of which were in these instances remarkably sharp and pallid, being covered by the thinnest of mucous membranes. On the contrary, in other cases so great was the thickening that these openings were obscured by tumour-like masses. In many of the cases the bones forming the walls of the nasal fossæ were bare and necrotic. Sloughs were observed in the vault of the pharynx and on the upper turbinated bones. In one case the walls of the sphenoidal sinus were quite denuded of muco-periosteum. Indeed, this sinus in the majority of the cases showed severe changes, being generally filled with gelatinous, greenish pus, or exhibited a collection of pus between the periosteum and the bony wall. It was always gravely implicated in the meningitis cases. The same conditions were observed in the frontal sinus and in the other air spaces communicating with the nose. Within the skull cavity purulent infiltration of the arachnoid and pia mater extended backwards, usually from the optic groove, or in some cases from the crista galli to the foramen magnum; from the base it spread over the convexities to involve the mesial surfaces of the hemispheres. The pus was seen in the processes of the pia mater dipping into the sulci and followed the reflexion covering the choroid plexus of the lateral ventricle; the membrane in this position was thick with œdema. Over the cribriform plate of the ethmoid in some cases the meningitis was especially marked; also along the ophthalmic veins at their entry into the cavernous sinus. The cranial nerve-sheaths of the first eight pairs were often profoundly affected; sometimes the intracranial part of the optic nerve was obscured by the exudation. The under-surface of the pons was involved in some instances and in both of the spinal cases. The cerebellum usually escaped. In one case referred to in the clinical part of this paper, we found hæmorrhagic effusion into the choroid plexus and velum interpositum; in the subarachnoid cisterna between the posterior surface of medulla and cerebellum; also in the fourth ventricle and on the ventral surface of the pons round the basilar artery. In 1 case examined otitis media was associated with the rhinitis and meningitis. Spinal lepto-meningitis was found in 2 cases out of 5 in which the cord was examined. In 12 cases out of 26 meningitis was present. The exudation in some cases was jelly-like, homogeneous, and clear both in the spinal and cerebral meninges. In others, however, the inflammatory material present was fluid rather than jelly-like, opaque and granular rather than clear; and we surmised at the time that these latter characters might be dependent upon the presence of the commoner pyogenic organisms in addition to that of the specific diplococcus.

The condition of the lungs and pleura varied; croupous pneumonia was present in the majority of the cases, but in a few the lungs were healthy. All stages of the pneumonic process were represented, from congestion to gangrene, and the extent of lung involved differed within very wide limits. Recent pleuritic lymph always accompanied the pneumonic consolidation. Effusion into the pleural cavity was often present but never exceeded a few ounces. In no case was endocarditis found. The pericardial sac contained excess of fluid in the majority of instances; the great vessels often showed excessive post-mortem staining. In one case œdema of both legs was noticed during life, and on examining the common femoral veins ante-mortem coagula were found. The peritoneal cavity usually showed a considerable amount of fluid. Perihepatitis and perisplenitis were marked features in one case, in which, however, there was also extensive recent pleurisy on both sides accompanying red hepatisation; the spleen weighed 12 oz., and both it and the liver were firmly adherent to the diaphragm. The infection was obviously general, for both cerebral and spinal meninges were involved. We examined the joints in some of the cases, always with a negative result. Double parotitis was observed once. In those cases in which dysenteric symptoms had been present no gross change was seen on inspection of the intestine and the mesenteric vessels appeared to be healthy. A question of interest is the inquiry as to the path taken by the organism from the nose to the brain and other viscera. As a result of our examinations we think the most usual course to the interior of the skull is from the muco-periosteum of the sphenoidal sinus to the sheaths of those nerves embedded in the wall of the cavernous sinus and thence by direct extension to the arachnoid and pia mater. In other cases undoubtedly the organism infects the meninges by extension along the nerves or vessels traversing the cribriform plate of the ethmoid; for it has been shown that the nasal lymphatics are in communication with the subdural and subarachnoid spaces by

means of perineural paths. Another possible route is by the Eustachian tube to the middle ear and petrous bone, thence by the seventh and eighth nerve sheaths.

The parotid glands are possibly infected from the mouth, though we think it more likely that they share the general infection when that is established. The lungs suffer in the same event, but probably sometimes by direct extension along the respiratory tract. We arrived at this conclusion from the rarity of antecedent laryngitis, tracheitis, or bronchitis, from the general distribution of the specific organism throughout the body, and from the character of the pneumonia, which was lobar, basal, and fibrinous. We remember having seen some years ago in the post-mortem room, several cases of purulent meningitis in which a primary focus of suppuration was diligently sought for without success. We remember one case in particular, that of a man who had twenty-four hours before admission first evidenced illness in change of conduct and sentiment. He died next day and on inspection suppurative meningitis was found without any apparent source of infection. We are inclined to believe that a bacteriological examination of the pus in this case would have revealed a pneumococcal infection.

Pathology.—Fifteen cases were subjected to a complete bacteriological examination. 1. In every case cultivations were made on gelatin, agar agar, blood agar, and in broth. These were taken (*a*) from the pus in the nasal fossæ and in the nasal, frontal, sphenoidal, ethmoidal and superior maxillary sinuses; (*b*) from the purulent exudate in the arachnoid, cerebral and spinal; (*c*) from the fluid in the cerebral ventricles; (*d*) from the pericardial, peritoneal, and pleuritic fluids; (*e*) from the heart blood and blood in the cranial venous sinuses; and (*f*) from the lungs, kidneys, and spleen. In all cases we were careful to exclude the possibility of infecting our cultures by using the hot iron freely and subsequently making incisions with sterilised instruments. We were also fortunate in being able to conduct the bacteriological examinations very soon after death.

In our cultivation experiments we obtained the organism described below in pure culture from either the spleen, the pericardial fluid, or the heart blood of 7 cases. In some of the cases we obtained the organism in pure culture from all three sources named. In the remaining 8 cases we obtained no organisms of any kind in these (pericardial, heart blood, and spleen) tissues in our cultures (one tube inoculated from each). In 2 cases we obtained pure cultures of the organism from the cerebral exudate, in 5 others examined it was associated with streptococci and staphylococci. The characters of the organism thus obtained are as follows.

Morphology.—Microscopical examination showed the pure cultures to consist of lanceolate micrococci, nearly always united in pairs and tending in old cultures to grow into chains, rarely occurring as single cocci. In recent cultures, particularly on blood agar, the cocci are surrounded by a transparent halo-like capsule which is most obvious in coverslip preparations from the recent tissues and which disappears in cultures on any media. Since the organism most commonly occurs as such we have called it a diplococcus throughout this paper. It stains well with aniline colours and by Gram's method. The capsule is also well seen after double staining with methylene blue and eosine.

Biological characters.—The diplococcus grows in the presence of oxygen. It is not motile. We find that it grows best in media having a slightly alkaline reaction and that the capsule is retained longest when the organism is grown on blood agar prepared according to the method advocated by Dr. Washbourn and Dr. Eyre, of London. Of its growth on gelatin we would prefer to reserve our opinion. Our experiments were made in the autumn and the room temperature very often varied 20° F. in the twenty-four hours. Once or twice we thought we were getting a growth on gelatin but we were never satisfied on this point. In broth it grows well, rapidly producing a cloudiness throughout the medium. In this medium we found that the organism was still pathogenic for rabbits at the end of four days. Upon blood agar the diplococcus forms minute, almost colourless colonies at the end of from twenty-four to forty-eight hours. Numerous coverslip preparations were made from the fresh tissues in every case and from the same sources from which cultures were taken. Microscopical examination of these coverslips showed the presence of the diplococcus which we have described throughout the body. In 9 of the cases we found this organism and no others in the heart blood, the pericardial fluid, and the spleen. The preparations taken from the nasal fossæ were, of course, always very mixed, but even in these the diplococcus was in great excess. In the pus from neighbouring sinuses various organisms were found, but here next to the diplococcus the most numerous organisms were streptococci and staphylococci. In the purulent exudate involving the arachnoid in 8 cases we found only the diplococcus: in the remainder streptococci and staphylococci were associated with it. From our microscopical examinations it seemed that the diplococcus first invaded the cerebral tissues, followed very speedily by the streptococci and staphylococci. In the two cases in which we examined the spinal arachnoid only the diplococcus was present. Preparations from the lung were always very mixed, but as before the diplococcus was in great excess. In the kidneys and the liver the diplococci were not as numerous as in the spleen.

Inoculation experiments.—Cultures and spleen juice injected into the peritoneal cavity of rabbits killed the animals in from twelve to forty-eight hours. After inoculation the temperature of the animal speedily rose to from 3° to 5° F. above normal and continued so until shortly before death, when it usually fell. Post-mortem examination showed an œdematous infiltration of the cellular tissues, chiefly about the seat of inoculation, while small hæmorrhagic spots were common throughout the body, the whole appearances being exactly as we had seen them in Dr. Washbourn's laboratory at Guy's Hospital after inoculation with the pneumococcus of Fränkel. In the spleen, the heart blood, and the œdematous infiltrations in these animals we found the diplococcus in immense numbers and again obtained it in pure culture. We also injected a virulent blood agar culture into the subcutaneous tissue of the neck of a horse. Six hours later the animal appeared to be very ill. The temperature was 107° and the respirations were from 50 to 60. He refused his food and continued in this condition for five days, when the temperature fell, his appetite returned, and he slowly recovered after an abscess had formed at the seat of inoculation.

Conclusions.—From these observations and experiments we conclude:—1. That the diplococcus we have described is identical with the pneumococcus of Fränkel but that probably it is of a more virulent type. 2. That the pneumococcus is the specific factor in the causation of cerebro-spinal meningitis. 3. That in these cases the pneumococcus first affects the nasal mucous membrane and produces there a definite local lesion (rhinitis), and that all other subsequent pathological effects—infection of frontal and nasal sinuses, middle-ear suppuration, parotitis, pneumonia, meningitis, &c.—are merely the result of the extension of the organism along various anatomical channels of infection—e.g., continuity of tissues, lymphatics, and blood-stream. The post-mortem appearances of the nasal region which led us in our first observations on this disease, before we had made any bacteriological investigations, to name it acute specific rhinitis will serve to show how strongly we were convinced of its local origin. 4. That a pneumococcic septicæmia the result of a pneumococcic rhinitis, even when unattended by such secondary effects as pneumonia or meningitis, is sufficient to cause death. May not this explain the "fulminating attacks" of epidemic cerebro-spinal meningitis of previous writers? It is interesting to compare the pathology of the disease under consideration with that of infection by the bacillus tuberculosis. In the latter the presence of a definite bacillus in every case of attack, whether the field be lung or brain, proclaims the specific nature of the invasion. We think that the observations here recorded are simply further illustrations of the multiform effects produced in the body by the life activity of an equally definite micro-organism and that further research will establish the contention that a general infection by the pneumococcus with its diverse lesions is often the complement of an unsuspected acute specific rhinitis.

In drawing this communication to a close we are conscious that there are many points which yet require attention and which we feel confident will throw further light on the apparent vagaries of this striking disease. We have been unable, for instance, to work out the history of the not infrequent presence in the cerebral meninges of streptococci and staphylococci, but from the fact that we have never found these organisms in the blood, the spleen, or the tissues we are inclined to the belief that they invade the brain only after the pneumococcus has prepared the way—an opinion which microscopical results appear to confirm. Neither have we had time to trace by means of histological sections the course of the pneumococcus from the nose to the brain. We have as yet done no work on immunity, but we

hope that the high virulence of this pneumococcus will facilitate the preparation of serum which may be efficient in cases of ordinary "pneumonia" as occurring in Europeans. In excuse for these many shortcomings we can only say that the present work was carried out in the spare time snatched from our private practices, and that we feel constrained to publish our results thus early in the hope that other observers will establish our chief contention that infection by the pneumococcus is primarily a purely local phenomenon.

Johannesburg, South Africa.

THE USE OF FORMALIN LAMPS FOR THE DISINFECTION OF ROOMS (ALFORMANT LAMPS AND FORMOGÈNE RICHARD).

BY A. A. KANTHACK, M.A., M.D. LOND., F.R.C.S. ENG., F.R.C.P. LOND.,

FELLOW OF KING'S COLLEGE, CAMBRIDGE; PROFESSOR OF PATHOLOGY, CAMBRIDGE UNIVERSITY.

(From the Pathological Laboratory of the University of Cambridge.)

THE disinfection of rooms, furniture, and bedding is a matter of great importance to all general practitioners and especially to those who live in the country. It must be the desire of all to possess a method which is both simple and certain and, at the same time, not destructive in its action. Numerous papers have appeared recently which have occupied themselves with the question of the disinfecting power of formalin vapour. It is generally allowed that formalin vapour is a powerful disinfectant and it therefore promises to replace those gaseous substances which have hitherto been in use and of which some are useless and others injurious to man and the objects around. Lately simple and complicated forms of apparatus have been designed for the rapid and continued production of formalin vapour, and these by their manufacturers have been recommended as being unfailing in their disinfecting action. Writers abroad, however, are gradually recognising the limitations of the formalin process and there is now an almost general consensus of opinion that formalin in the manner in which it is produced by almost all the different apparatus in use has only a limited power of penetration. There is no necessity for me to survey the extensive literature upon this subject of disinfection of rooms by means of formalin vapours, since it may be found in almost any recent volume of the *Centralblatt für Bacteriologie* and the *Zeitschrift für Hygiene*.

In this country three formalin lamps are in use, and having been frequently asked regarding their respective value I undertook a series of experiments in order to satisfy myself on this point, especially since others have already spoken with unveiled enthusiasm of these lamps. The Formalin Hygienic Company supply two simple apparatus—viz., the Alformant Lamps A and B; and the Germicide Disinfecting Association a somewhat more complicated lamp, the Formogène Richard Lamp. In this paper I propose to describe a number of experiments which were made under laboratory conditions with the purpose of independently testing the efficiency of these three lamps, which all profess to accomplish similar results. By means of laboratory experiments, however, we can only decide under what conditions formalin vapours are likely to act; the final verdict must be pronounced when an apparatus has been tested under practical conditions. The principle of the Alformant lamps depends upon the conversion of solid paraform into active formalin gas by means of heat in the presence of water and carbonic acid. Alformant Lamp B is a small, toy-like apparatus, and it is stated in the directions for use that one tablet of paraform is required for the ordinary sterilisation of 1000 cubic feet of air and ten tablets are required for thorough disinfection and certain destruction of all pathogenic germs in 1000 cubic feet of space, whether these be scattered about superficially or hidden in bedding, stuffed seats, books, &c. Alformant Lamp A is merely a larger model; otherwise it is said to act in exactly the same manner as Alformant Lamp B. In the Formogène Lamp the formalin is obtained by means of the incomplete combustion of strong wood spirit. It is unnecessary for me to describe the mechanism of the lamps and I shall at once proceed to state my results.

1. *Alformant Lamp B (small pattern).*—Two sets of experiments were made and in each case 25 tablets were burnt. A room was used, the windows, fireplace, and other openings of which were carefully closed and sealed, so that little or no formalin could or did escape. It has recently been stated that such stringent precautions are not necessary, but it seemed advisable under the circumstances to prevent any loss of the formalin vapour. The measurement of the room was 18 ft. by 12 ft. by 9 ft.—that is, its capacity was well under 2500 cubic feet, so that, according to the instructions, 25 tablets should have amply sufficed for complete disinfection. As test objects I used small strips of linen which had been dipped (1) in 24 hours old broth cultures of anthrax bacilli; (2) in 24 hours old broth cultures of typhoid bacilli; (3) in 24 hours old broth cultures of staphylococcus pyogenes aureus; (4) in sewage effluent; and (5) in an old typhoid stool. These were subsequently dried over sulphuric acid at 38° C. The dust of the room also served as a test object and animals were placed in the room during the experiment. The strips were distributed in the room at different places, some openly exposed on the benches and on the floor, others wrapped up in ordinary dusters. After 24 hours the room was opened and the strips at once dropped into broth, and the latter was then incubated at 38° C. The results of these 2 experiments are given in tabular form.

Experiment I. (Alformant Lamp B).

Test material.	Exposed on table or floor.	Wrapped in dusters.
Linen strips dipped in sewage	+	-
Linen strips dipped in a typhoid stool	+ −	-
Linen strips dipped in culture of typhoid bacillus	+	-
Linen strips dipped in cultures of anthrax bacillus	+	-
Linen strips dipped in culture of staphylococcus pyogenes aureus ...	+	-
24 hours old culture of anthrax bacillus on agar-agar	- +	-
Dust	−	...

+ = completely sterilised; − = not sterilised; and $\frac{+}{-}$ = sometimes sterilised, at other times not sterilised.

We learn from this experiment that only the most superficially exposed material was disinfected and that the formalin failed to penetrate even through thin dusters.

A second experiment was arranged in exactly the same manner, 25 tablets being used as before. In this case all the linen strips, whether superficially exposed or not, had escaped the action of the formalin, so that this experiment was altogether negative, although all possible precautions had been taken.

Experiment II. (Alformant Lamp B).

Test material.	Exposed on table or floor.	Wrapped in dusters.
Linen strips dipped in sewage	-	-
Linen strips dipped in typhoid stool	-	-
Linen strips dipped in 24 hours old broth culture of typhoid bacillus...	-	-
Linen strips dipped in 24 hours old broth culture of anthrax bacillus ...	-	-
Linen strips dipped in 24 hours old broth culture of staphylococcus pyogenes aureus	-	-
24 hours old agar-agar culture of anthrax bacillus	-	-
Dust	-	...

In this experiment disinfection failed completely.

It is evident, especially when we also consider Experiment I., that Alformant Lamp B is uncertain in its action and therefore untrustworthy. Hence this lamp, however

tempting in its modest simplicity it may appear, cannot be used for the disinfection of rooms, for certainty in its action must be a necessary condition.

2. *Alformant Lamp A.*—Having obtained such unsatisfactory or at any rate untrustworthy results with the smaller lamp I took the large Alformant Lamp A and using 50 tablets on this occasion I arranged the experiment almost exactly as the previous ones.

Experiment III. (Alformant Lamp A).

Test material.	Exposed on table or floor.	Wrapped in dusters.
Linen strips dipped in 24 hours old broth cultures of typhoid bacillus	+	–
Linen strips dipped in 24 hours old broth cultures of anthrax bacillus	+ –	+ –
Linen strips dipped in 24 hours old broth cultures of staphylococcus pyogenes aureus	+	+
Linen strips impregnated with spores of the hay bacillus	–	–
Dust	–	...

The previous experiment was repeated with the Alformant Lamp A, using again 50 tablets. The result was as follows:—

Experiment IV. (Alformant Lamp A).

Test material.	Exposed on table or floor.	Wrapped in dusters.	Placed in small book.	Placed in a blanket.*
Linen strips dipped in 24 hours old broth cultures of bacterium coli	+	–	–	...
Linen strips dipped in 24 hours old broth cultures of anthrax bacillus	+	+ –	–	–
Linen strips dipped in 24 hours old broth cultures of staphylococcus pyogenes aureus	+	–	...	–
Linen strips impregnated with spores of the hay bacillus	–	–	–	–
Linen strips dipped in typhoid stool	–	–	–	...
Dust in room	–	...	...	...

* The blanket was hung over a cord and the strips were placed between the two layers.

We learn from these experiments that Alformant Lamp A is almost as uncertain in its action as Lamp B, that at best it only affects the most superficial organisms or materials, that it has little or no penetrating power, and that a single sterilisation is certainly insufficient.

It is difficult to explain how others, in this country especially, succeeded in getting better results; in my hands, however, numerous failures had to be recorded, so that although the lamp is infinitely better than SO_2, as ordinarily applied, it is not trustworthy enough for practical use when employed as indicated in the "directions for use." It may be mentioned that animals left in the rooms during the experiment invariably survived.

3. *Formogène Richard.*—Preliminary experiments showed that with a single lamp the results were uncertain and therefore I performed three complete experiments, using two lamps. In this case the odour of the gas which is given off is much stronger than is the case with the Alformant lamps, so that the cultivations at the end of the experiments were always made under considerable personal suffering on account of the strong irritant action of the gas, which made a prolonged sojourn in the room impossible. Animals left in the room during the process of disinfection invariably died, so that undoubtedly we are here dealing with a much more powerful gas. The following results were obtained:—

Experiment V. (Formogène Richard—2 lamps).

Test material.	Exposed on table or floor.	Wrapped in dusters.	Placed in a small book.	Placed in a blanket.	Placed in a covered glass dish.	Placed in a bundle of cotton wool.
Linen strips dipped in 24 hours old broth cultures of bacterium coli	+	+	+*	+	...	–
Linen strips dipped in 24 hours old broth cultures of anthrax bacillus	+	+	+†	+	–	–
Linen strips dipped in 24 hours old broth cultures of staphylococcus pyogenes aureus	+	+	–‡	+	...	...
Linen strips impregnated with the spores of the hay bacillus	+ –	+ –	...	...	...	...
Dust	+ –	...	...	...	...	...

* Between pages 24 and 25. † Between pages 10 and 11.
‡ Between pages 100 and 101.

Experiment VI. (Formogène Richard—2 lamps).

Test material.	Exposed on table or floor.	Wrapped in dusters.	Placed in a small book.	Placed in a blanket.	Placed in a covered glass dish.	Placed in a bundle of cotton wool.
Linen strips dipped in 24 hours old broth cultures of bacterium coli	+	+	+*	+	...	–
Linen strips dipped in 24 hours old broth cultures of anthrax bacillus	+	+	+†	+	...	–
Linen strips dipped in 24 hours old broth cultures of staphylococcus pyogenes aureus	+	+	+‡	+	...	...
Linen strips impregnated with spores of the hay bacillus	+	+ –	...	...	...	...
Dust	+ –	...	...	...	...	...

* Between pages 24 and 25. † Between pages 18 and 19.
‡ Between pages 10 and 11.

In the following experiment the flue of the gas stove was left open in order to test whether it was necessary to observe the strictest precautions in sealing the room.

Experiment VII. (Formogène Richard, 2 lamps; flue open).

Test material.	Exposed on table or floor.	Wrapped in dusters.	Placed in a small book.	Placed in a blanket.	Placed in a covered glass dish.	Placed in a bundle of cotton wool.
Linen strips dipped in 24 hours old broth cultures of bacterium coli	+	+	–*	...	...	...
Linen strips dipped in 24 hours old broth cultures of anthrax bacillus	+	+ –	+† –	–	–	–
Linen strips dipped in 24 hours old broth cultures of staphylococcus pyogenes aureus	+	+ –	+‡ –	+	...	...
Linen strips impregnated with spores of the hay bacillus	+	+	...	...	...	...
Dust	+ –	...	...	...	...	...

* Between pages 24 and 25. † Between pages 10 and 11.
‡ Between pages 18 and 19.

In this experiment the results were not quite so good or certain as in the previous cases and probably this was due to the fact that much of the formalin vapour escaped through the open flue.

Experiment VIII. Effect upon fæcal stains and blood-stains.—Experiments were also made as to the effect of formalin vapour on fæcal stains or blood-stains. It is important to know whether such stains are rendered indelible or not, for if they are it is obviously impossible to disinfect sheets or other materials soiled with fæces or blood without previously washing them. It was found that, as has already been shown by others, handkerchiefs stained with blood or fæces, although completely sterilised by the vapours produced by two Formogène Richard lamps, are ruined, because no amount of washing afterwards will remove the stains. It is therefore impossible to use formalin vapours for the direct disinfection of linen soiled with fæces or blood.

Experiment IX. Effect upon aniline dyes.—Silks dyed with aniline colours, as supplied by the "Farbwerke vorm. Meister Lucius und Brüning, Höchst," as patterns (standard colours on silk, 1894, No. 350), were exposed for 24 hours to the action of formalin vapours produced by two Formogène Richard lamps. It was found that the dyes were not destroyed or even altered in the slightest degree. Weak solutions of the following stains—methylene blue, gentian violet, Victoria blue, dahlia, methyl violet, thionine, Hoffmann's blue, Ehrlich's hæmatoxylin, and hæmalum—were similarly exposed for 24 hours, with the result that hæmalum alone was bleached. Therefore the formalin gas evolved by this lamp was perfectly harmless to the dyes in general use. It may be remarked also that metal and polished wood were in no way affected.

These results show the limits of room disinfection by these formalin lamps and I shall reproduce them in the shape of final conclusions. In other experiments which need not be detailed here I was able to confirm the view expressed by others, that active formalin vapours act best in a warm atmosphere, for I found that when I kept the gas burning during the twenty-four hours there were generally less failures with the sterilisation of dust than when the experiment was carried out under ordinary conditions.

FINAL CONCLUSIONS.

So far as my experiments go, Formogène Richard lamps are much more certain in their action than Alformant lamps A and B. Of the latter, B appears to me to be valueless, except as a deodorizer and A is too uncertain.

1. With regard to the Formogène Richard lamp it is necessary, as numerous preliminary experiments have shown me, to use two lamps, even for so small a room as the one in which these experiments have been made.

2. Formalin does not penetrate deeply and, as admitted by all competent observers, cannot be used for the sterilisation of blankets, linen, &c., heaped one upon the other; it is merely a superficial disinfectant.

3. It must be pointed out that blood and fæcal stains are indelibly fixed in handkerchiefs and linen and such like material. Such articles must therefore be disinfected by means of boiling or steaming.

4. Metal, dyes, and most colours are not destroyed, although some aniline dyes may be slightly altered.

5. Dust and soil are not sterilised with certainty.

6. I agree, therefore, with F. Abba and Rondelli,[1] that formalin, if efficiently produced, is useful for the superficial disinfection of such substances as are injured by steam or liquid disinfectants or by irritant gaseous bodies such as chlorine.

When using the Formogène lamp for disinfection of a room strips of linen impregnated with staphylococcus aureus must be placed in the room as indicators; the disinfection is not complete unless these strips are sterile (Pfuhl's test).

A table has been prepared which allows of a ready comparison between the results obtained by the Alformant Lamp (A) and those obtained by the Formogène Lamp. It is evident from the table that results obtained with the latter are much more favourable than those obtained with the former. The experiments were conducted under identical conditions; the strips were exposed in the same places, they were prepared in the same manner, and subsequently tested by the same method. Recently Schlossmann has described a new process of disinfection by formalin vapours which was tested in the Institut für Infectionskrankheiten and was pronounced to be highly efficient. As yet I have found difficulty in procuring this apparatus and therefore propose to report upon the same later. Trillat's apparatus I do not intend to discuss, because it is but little known in this country. It also, as shown by others, is useful only for superficial disinfection, and in this respect, provided that active formo-chloral has been used, works as well as, and no better than, the Formogène Lamp.

[1] Zeitschrift für Hygiene, 1898, vol. xxvii., p. 49.

Tabular Comparison of Experiments IV., V., and VI.

Nature of organism.	Locality where strips were placed.	Alformant A, Experiment IV.	Formogène, Experiment V.	Formogène, Experiment VI.
Strips impregnated with bacillus anthracis.	Table I.	+	+	+
	Table II.	+	+	+
	In duster I.	+	+	+
	In duster II.	-	+	+
	In blanket.	-	+	+
	In book.	-	+	+
	In sawdust.*	-	+	+
	Under newspapers.*	-	+	+
	In wool.	...	-	-
Strips impregnated with bacterium coli.	In book.	-	+	+
	Table I.	+	+	+
	In duster I.	-	+	+
	In duster II.	-	+	+
	Under wool.*	+	+	+
	Under paper.*	-	+	+
	In wool.	...	-	-
Strips impregnated with staphylococcus pyogenes aureus.	Table I.	+	+	+
	Table II.	+	+	+
	Table III.	+	+	+
	Table IV.	+	+	+
	In duster I.	-	-	+
	In blanket.	-	+	+
	In book.	...	-	+

+ = successful disinfection. - = unsuccessful disinfection.
* These experiments have not been specifically mentioned in the previous tables.

Cambridge.

OBSERVATIONS ON AN INFECTIOUS DISEASE IN LASCARS HAVING CLOSE RELATIONS WITH VARIOLA AND VARICELLA.

BY R. S. THOMSON, B.Sc., M.D., C.M. GLASG.,
VISITING PHYSICIAN, CITY OF GLASGOW SMALL-POX HOSPITAL, BELVIDERE, ETC.,
AND
JOHN BROWNLEE, M.A., M.D. GLASG., D.P.H. CAMB.,
LATE ACTING SUPERINTENDENT, CITY OF GLASGOW SMALL-POX HOSPITAL, BELVIDERE.

THE following observations made upon a number of lascars admitted to the City of Glasgow Small-pox Hospital, Belvidere, in the spring of 1898 are of considerable interest in so far that the clinical features of the disease from which these men were suffering suggested in certain cases variola and in others varicella, while in all some of the symptoms presented were alien to both. 16 cases of the disease were observed in various stages. Some came under observation as early as the second day of illness, while others were not admitted to the wards till the fifth or sixth day. In one case only was the whole course of the disease observed from its onset till its termination. The patients were lascar seamen from a steamship trading between Calcutta and Glasgow. On board this vessel 69 lascars were employed, who were accommodated in the forecastle and came little into contact with the European members

of the crew. So far as could be ascertained none of the lascars left the vessel during the voyage and the outbreak of the disease did not become manifest till after the arrival of the ship in Glasgow, when it was thoroughly overhauled and certain extensive alterations were carried out. During the progress of this work about 250 British workmen were employed and these, entering the forecastle freely and even cooking some of their food there, came into intimate contact with the lascars. It is important to note that the lascars and Europeans mixed together thus freely, even at a time when some of the former who were suffering from the disease were presumably in a highly infective condition. We should observe that, as far as could be ascertained, not one of the European artisans employed on board had been revaccinated. The cases were admitted to hospital between April 1st and May 7th and occurred in successive groups separated by periods which might be justly regarded as representing those of incubation. Owing to the fact that the earlier cases were certified as cases of small-pox the forecastle and other parts of the ship frequented by the lascars, as well as all clothing, were thoroughly cleaned and disinfected, consequently it seems legitimate to conclude that the infection in the later cases took place from man to man and was not the result of fomites. During the earlier part of the outbreak the precautions taken by the sanitary authorities were those which would have been carried out had the outbreak been one of small-pox, the disease from which the lascars, at least at the outset, were supposed to be suffering. With this diagnosis in view revaccination was offered to the British workmen but was refused absolutely by them all, though revaccination was carried out on all the crew. It thus appeared that the artisans were exposed to the infection without any recent protection against small-pox and that they came into personal contact with those of the lascars who were sickening from the disease or who were in its later stages. Contact with the latter class of cases certainly occurred, as some of those who were admitted to hospital were persons who had been going about freely for some days after the disease had declared itself and who were presumably, therefore, in a highly infective state.

History of the outbreak.—The steamship in question left Calcutta on Feb. 10th, 1898, Colombo on the 18th of the same month, Suez on March 1st, Port Said on the 2nd, Malta on the 6th, arrived at London on the 15th, and finally reached Glasgow on the 22nd. Small-pox was present in Calcutta, Port Said, and Suez while the ship was in these ports, and hence there was a possibility of infection from each of these sources, but, as already observed, the lascars were not permitted to land and could have been infected by small-pox directly only in Calcutta or indirectly at the other ports through the European members of the crew. This greatly reduced the chance of infection from small-pox and it must further be noted that, as will be seen later, the period of incubation of this disease, so far as it can be ascertained, excludes the likelihood of infection at intermediate ports, leaving Calcutta only as the centre from which the disease was carried. The first case of illness among the lascars was noted on board ship about March 10th. On April 2nd three lascars were admitted to the hospital presenting an eruption in various stages of desiccation. Judging from subsequent experience it is probable that these patients had already been ill for five or six days, their illness presumably commencing about March 27th. A single case had been admitted on April 1st, but this was of more recent origin than the others. A second group of 8 cases came under observation between April 13th and April 19th. The later members of this group were possibly infected by a member of the lascar crew who had been overlooked and who was not admitted to hospital till April 7th. A third group of 3 cases came under observation between May 3rd and May 7th. There were no deaths.

Features of the disease.—The eruption was the most outstanding feature of the disease. Speaking generally, it may be described as consisting of three stages—a papular, a vesicular, and a desiccative or crusting stage. While it is convenient for purposes of description to classify the phases of the eruption in this manner, it is important to note that the papular and vesicular forms were frequently seen together on adjacent parts of the body at the same time. In the cases which came early under observation the great bulk of the eruption was papular, but even on the first day of the eruption a few vesicles could in some of the cases be seen in various parts of the body, but notably on the trunk. Whether these vesicles were invariably preceded by a papular stage it is very difficult to say, owing to the limited number of cases observed, but if this were so then in some instances at all events the papular stage must have been very evanescent. The papules themselves were mostly of considerable size, hard, somewhat shotty, and acuminate. No distinction of colour could be made out between them and the surrounding skin in their earlier stage of development; in fact, at this period they were more palpable than visible. Later, however, they became of a deep-red or dusky colour. While in each case a considerable number of the papules vesiculated, yet in most of the patients the bulk of, and in two cases practically all the papules showed no tendency towards vesicular change. When thus arrested in development the papules gradually disappeared as convalescence advanced without crusting, evidently undergoing a process of direct absorption. In the later stage of papulation these eruptive elements which were about to vesiculate became surrounded by a well-marked red areola and this process was also observed in the case of a small number of papules which did not undergo further change before all trace of them was lost. The vesicles in most instances, and possibly in all, developed from papules, the process of vesiculation beginning at the apex. In some elements the change seemed to be early arrested, the vesicle becoming crusted while still very small and before the base of the papule had undergone any appreciable change. When vesiculation had advanced to its fullest extent the eruptive elements were somewhat irregular in outline though occasionally almost circular. They measured from ⅛ in. to ¼ in. in diameter, but a few were larger than this. The vesicles contained an almost clear fluid, but they did not present the brilliant glassy appearance so characteristic of the early varicellar vesicle, more closely resembling small bullæ such as might have been produced by drops of scalding water sprinkled over the skin. These vesicles on palpation presented a very marked sense of resistance or "body" and in this respect reminded one very forcibly of small-pox vesicles, the fragile character of the varicella vesicle being almost entirely absent. The vesicles were unilocular, but the interior cavity in most cases examined was partially divided by fine trabeculæ. Umbilication was absent altogether from the fully developed vesicle, but as desiccation commenced in the oldest parts of the element—i.e., those nearest the centre—those parts became depressed, giving rise to a pseudo-umbilication. Each vesicle was surrounded by a dark-red areola, often of considerable width and presenting a very decided sense of infiltration to the touch; this areola persisted well into the stage of desiccation. The fluid within the vesicle, while originally clear and serous-looking, became cloudy later and distinctly serous, but in no instance was a true pustule formed. A microscopic examination of the fluid in the earlier stage revealed no detectable micro-organism, even the staphylococcus being absent. The course of the vesicle was practically the same in every instance, with the exception of a few which were ruptured by direct violence. The vesicles gradually developed, as above described, attaining their fullest growth in from twenty-eight to forty-eight hours from their first appearance, at which time they were extremely tense and unyielding. Thereafter the tenseness slowly subsided, evidently as the result of absorption, the vesicle becoming softer and more flaccid, as so frequently occurs in small-pox. The whole duration of the vesicular stage varied from thirty-six to seventy-two hours. In the case of those vesicles in which rupture occurred the base was found dense and infiltrated. The process of crusting, as already remarked, began in the central part of the vesicle and gradually extended outwards. This process occupied a considerable time and in most cases the periphery of the vesicle remained soft and moist for several days, while the centre was covered with a brownish crust. The scabs had the appearance of those seen in some cases of modified small-pox, being of a reddish brown colour and of some little thickness; they resembled neither the thin superficial crust so familiar in varicella nor the coarse crusts so characteristic of unmodified small-pox. These were not readily separated even after complete desiccation had taken place and when forcibly removed they left behind a bleeding surface. Later, when complete cicatrisation of the subjacent tissue had taken place, removal of the crusts revealed a moderately deep and well-marked pit

penetrating through the Malpighian layer of the skin, as was evident from the complete destruction of the pigmented tissue, the cicatrices having a white colour slightly tinged with pink. These pits were foveated, persistent, and well marked when the patients left the hospital at the end of three weeks.

Period and distribution of the eruption.—In one case[1] in which the disease developed after admission to hospital the eruption was present on the first day, and in a second case, in which the patient was admitted on the first day of illness, the eruption was also found. It is difficult to say exactly at what period of illness the eruption first appeared among those who were not observed from the onset, but there seems little doubt that in a certain proportion at any rate of these cases the eruption appeared on the first day. On the second day of illness the eruption was well marked in all the cases which came under observation within that period, by which time, at least in the majority of cases, it seemed to have attained its maximum so far as the number of elements on the trunk was concerned; papules appeared on the lower extremities rather later than on the trunk and other parts of the body. It is exceedingly difficult to say whether the eruption invariably appeared in what might be regarded as one crop or whether in some instances more than one crop appeared; but it is certain that in a great majority of the cases, and more especially in those in which the bulk of the eruption remained papular throughout, the tendency was for one crop and one only to develop. This was true of 9 of the 16 cases which came early under observation, while in 2 cases it was thought that a second crop might have developed, but the evidence of this was not regarded as conclusive. In 5 cases the illness was so far advanced when the patients were admitted to hospital that this point could not be decided. The eruption appeared first upon the face and trunk but did not seem to have any special affinity for the former. It was usually most abundant on the back. Elements of eruption likewise appeared on the scalp, chest, and arms, but were especially sparse over the abdomen. In none of the cases was the eruption found on the palms and soles. On the legs the elements were more sparsely scattered and appeared later than elsewhere. In the throat in 7 out of 13 of the cases which came under observation at a sufficiently early period of the illness a variable amount of eruption was seen on the fauces and palate. The remaining 3 cases were admitted when any faucial eruption which might have been present earlier in the case must have completely disappeared.

Temperature.—Some of the cases were admitted to hospital so late that the febrile period had entirely passed when they first came under observation. In about half the cases, however, where admission followed the onset almost immediately it was possible to observe the whole of the pyrexial movement. In every case observed at this early time there was a decided elevation of temperature, which, however, varied in amount in different cases and seemed to have little relation to the amount of the eruption. In different individuals the highest febrile point attained varied from 100°F. to 104°, and the duration of the febrile period from three to six days. The termination of the fever was marked by a short lysis and in one case by a very decided critical fall. The eruption appeared within a few hours of the onset of the febrile symptoms and there was nothing in the course of the temperature at all suggestive of that defervescence which is so characteristic a feature of many cases of unmodified small-pox with the first appearance of the eruption. The fever had more or less of a remittent character, the difference between morning and evening temperature sometimes amounting to as much as 2° or 3°. In some of the cases the highest temperature registered was 101°; in others, however, the febrile disturbance was very marked, the evening temperature in 2 cases reaching 104° and varying between that and 103° for five or six days. The actual rise of temperature at the period of onset was observed in one case only and in this the temperature attained its maximum of 104° in the course of a few hours.

General course of the attack.—The onset of the disease was sudden and associated with general symptoms of fever, as headache, sickness and vomiting, thirst, loss of appetite, malaise, muscular weakness, and febrile pain. Headache in one or two cases was very severe and in some backache was a clamant symptom. Sleeplessness was marked in several of the cases but delirium was not observed. The eyes were suffused in several instances, but this condition passed off with the fever. The tongue was covered with a whitish or slightly yellowish fur and the bowels were constipated. The urine presented febrile characters, but though two samples from each case were examined daily albumin was found in only one case early in the febrile period and had completely disappeared by the beginning of the fifth day of illness. There was nothing abnormal found in the liver or spleen, the lungs or heart, on careful physical examination. The pulse was moderately rapid, but not more so than might have been expected to be associated with the febrile state in each case. In addition to the fauces presenting eruptive elements in some cases, the mucous membrane of the fauces, pharynx, and palate was found congested in nearly every case which came under observation early in the attack. As already stated, the disease ran a febrile course of from four to seven days, the general symptoms disappearing with the fall in the temperature. No complications were observed in any instance.

Relation to vaccination and antecedent small-pox.—3 of the 16 cases presented evidence of antecedent small-pox—namely, deep pitting, especially on the face. Of these 1 had suffered from an attack of small-pox evidently of a very severe type twenty-six years before he came under our observation, while the other 2 had suffered from milder attacks at periods varying from two to three years before their admission to the wards. With regard to the first patient, vaccination had apparently been successfully performed at some period subsequently to the small-pox attack. A second patient presented two well-marked vaccinia cicatrices, but it was impossible to discover whether vaccination had been performed before or after his attack of small-pox. No evidence of vaccination could be found in the third case. The remaining 13 had all been successfully vaccinated in early life and showed proof of this by the presence of well-marked and in most cases good vaccinia scars. 5 of the patients were revaccinated during the earlier period of the disease or while crusts were still adherent. This was done rather as a test than as a prophylactic measure. In 4 cases vaccination proved completely successful and in 1 case it failed. This case was one of those already referred to as having suffered from a comparatively recent attack of small-pox. The other 11 cases were successfully revaccinated on board the ship from two to four weeks before the onset of the disease we are now considering, and in all the revaccination had completed a typical course some little time before the first appearance of symptoms.

Specific characters of the disease.—Having described in detail the eruption and general symptoms of the disease the nature of the diagnosis now falls to be decided. As stated in the early part of this paper, the disease presented some characters suggestive of small-pox and others suggestive of chicken-pox, while certain points, notably in the character and course of the eruption, presented features differing from both of these. That the disease was a specific one is evident from the manner in which the cases occurred in successive groups separated by periods varying from ten to fifteen days. The first of these periods between the outbreaks extended to fifteen days, the second to ten days, and the third to thirteen days. The last two intervals represent minimum periods. If, as we are quite entitled to do, we exclude possible infection from clothing there seems little reason to doubt that these must be regarded as representing a period of incubation which, while it would be impossible to fix its actual duration from the data at our command, might be approximately represented by from ten to fifteen days—a period of incubation with which we are familiar as occurring very frequently in other forms of specific infectious disease. The gradual development of the eruptive elements on the skin, coupled with the definite course presented by the disease and the similarity of the eruption among different cases, point to the same conclusion. Another circumstance bearing in the same direction is to be found in the gradual increase in the number of cases in the second and third groups; the first case was followed by a group of 5, and that again by a group of 8, while the last was followed by a group of 3, the falling off being probably due partly to the precautions taken and partly to a lack of susceptible individuals.

On admission of the cases to the hospital the question

[1] This patient was admitted to hospital on account of the presence of two small scars over the ensiform cartilage which it was supposed might have been due to a recent attack of the malady.

which presented itself for decision was whether the patients were suffering from small-pox. After an examination of the cases, a careful consideration of the history, and a study of the course of the attack, it was decided that small-pox (as an alternative diagnosis) must be entirely excluded on the following grounds:—1. The coincidence of the rash with the onset of the general symptoms, the temperature rising and advancing to some extent at least with the development of the eruption. 2. The entire absence of anything like a secondary fever such as we find even in some cases of modified small-pox. 3. The absence of any special predilection of the eruption for the face and scalp, the bulk of the rash appearing mostly on the back, chest, and arms. 4. The entire absence of eruption from the palms and soles in every case observed. 5. The rapid transformation of the papules in certain cases into vesicles, the latter being occasionally present even on the first day of illness. 6. True pustules were not seen in any instance. In addition to these clinical reasons for putting small-pox entirely out of consideration a certain amount of weight was given in the decision to the fact that three of the patients had already passed through an attack of severe small-pox, 2 of them comparatively recently. The small-pox in at least 2 of the cases was unmodified. 4 of the patients were revaccinated successfully during the crusting stage, while the others had been revaccinated with success from two to four weeks before the first appearance of symptoms. It may be supposed that comparatively little value should be attached to this point, but the successful vaccination of small-pox convalescents as well as the occurrence of small-pox so soon after successful revaccination is entirely contrary to the experience of small-pox in Glasgow. An examination into this question among the cases treated in the hospital during the last five years shows that 52 small-pox patients were vaccinated at various periods during the stage of eruption and convalescence, some twice or even thrice, but in no single instance was any reaction manifested, except in some cases a slight redness of the skin such as might occur in the neighbourhood of any superficial wound. As already stated, these patients came into intimate contact with 51 other lascars on board ship, of whom 2 were unvaccinated, and 250 British workmen of varying ages, of whom none had been revaccinated, and yet not one of these contracted the disease. This exemption of over 300 intimately associated persons, many of whom from absence of revaccination and a few from absence of primary vaccination were probably susceptible to the small-pox poison, is likewise entirely opposed to our experience of the behaviour of small-pox under similar conditions. The complete exemption of Europeans both on board ship and in hospital from this disease is noteworthy.

Varicella is the only other specific disease suggested by the clinical features of the cases under consideration. In some respects the resemblance of the disease to chicken-pox was very striking, notably the coincidence of the onset with the first appearance of the eruption as well as the general character of the fully developed rash and the rapid evolution of certain of its elements. On the other hand, the bulk of the signs and symptoms showed little or no resemblance to those which we are accustomed to regard as most characteristic of chicken-pox. The papules which constituted the first stage of the eruption were quite unlike those seen in varicella. In the disease which we are discussing these were large, hard, dense, and frequently cone-shaped, the apex being more or less pointed. At first they were colourless and not readily detected by the eye, though they could be felt in the skin as small, hard, and somewhat shotty masses; later, as already explained, they assumed a dusky-red colour. In all these points they differed from the papules of true varicella, which are small, soft, and somewhat velvety to the touch, flat, and of a bright-red colour, and which present an entire absence of that shotty feeling which was so notable a feature of the former eruption. Further, we find that in some of the cases the great bulk of the papular elements, and in one case the whole of them, showed no tendency to vesiculation, but gradually disappeared by absorption of their solid constituents in a manner similar to that which is occasionally seen in modified small-pox.

The majority of the elements which underwent progressive growth did not vesiculate till the second or even the third day from the first appearance of the papules. The frequency of the eruption in the throat with the very marked catarrhal condition of the fauces and the invariable absence of the eruption from the palms and soles are also, in view of the age of the patients, unusual features of varicella. In the latter eruptive stage the very wide areola, the slow process of desiccation, and the deep pitting without any evidence of secondary infection (as gauged by the absence of pyogenic organisms from the vesicles) cannot be explained on the supposition that the disease was varicella. With regard to the symptoms the high temperature observed in most of the cases, with the severe pain in the back and vomiting, while not to be insisted on are yet in favour of the view that the disease is not varicella; besides, the fact that it occurred in so many adults points in the same direction. The following report of one of the cases furnishes a clear clinical picture of the condition under consideration.

The patient, a seaman, aged twenty-five years, who had been vaccinated in youth was revaccinated successfully on April 2nd. He was admitted to hospital on April 16th, having fallen ill the day before with symptoms of fever, including malaise, headache, debility, &c. There was no pain in the back and no vomiting. The eruption was seen for the first time on the same day. The temperature on admission was 103° F. When seen in the hospital there was a marked eruption of papules on the face, presenting the usual variolous character and distribution, though less marked along the roots of the hair than is often seen in small-pox. There were a few papules on the scalp. On the trunk, back and front, there was a similar papular eruption, mixed, however, with varicella-like vesicles of about the size of a split pea, a few of which had begun to show commencing crusting in the centre; in addition a few of the elements contained opalescent fluid. The eruption was moderately abundant on the trunk but very sparse on the limbs, the more advanced elements being surrounded by a dusky-red areola. There was no eruption on either the palms of the hands or the soles of the feet. The fauces and the soft and hard palates were markedly congested and they presented an abundant eruption of vesicles. There was pain on swallowing. By April 18th the elements on the face were vesiculating, while the vesicles on the trunk were advancing in the process of crusting, those less advanced being sero-purulent, hard, tense, and indistinguishable from those of varioloid. Umbilication was present only in the vesicles in which crusting had begun. On the morning of the 19th the temperature, which had been 104° on the preceding night, was 101°. The eruption on the face was crusting in parts, the most advanced vesicles showing a small reddish crust in the centre, while the less advanced were still sero-purulent. Some of the original papules on the trunk continued unchanged. The malaise was passing off. On the 20th the temperature was normal. Desiccation of the vesicles had continued but was not yet complete. Some of the original papules remained unchanged, there being no indication of vesiculation, and these were becoming gradually absorbed. On May 2nd the patient was dismissed. The general health was good and the only remains of the eruption were to be found in the presence of a number of moderately deep cicatrices of a pale reddish colour on the face and trunk.

An examination of the literature dealing with variola, varioloid, and varicella fails to furnish any allusion to a disease similar to that which we have just described, except in a paper read before the Epidemiological Society of London by Dr. Izett Anderson in 1866 and published in the Transactions of that society in 1867.[2] Dr. Anderson's description applies to an outbreak in Kingston, Jamaica, of a disease which was evidently neither variola nor varicella and which presented features closely resembling the disease from which the above patients suffered. The following points of resemblance in the description referred to are very striking. 1. The period of incubation amounted to about fourteen days. 2. The febrile period was short, up to five or six days being its usual duration, while the temperature was of a decidedly remittent type. 3. There was an absence of secondary fever. 4. There was a constant catarrh of the throat with the presence of an eruption on the soft parts in many cases. 5. The eruption presented a papular stage, a vesicular stage, and in some cases a pustular stage. (*a*) The papular stage was of considerable duration, vesiculation occurring in from twenty-four to forty-eight hours from the first appearance of the rash, which showed itself first on the face and extended to other parts, though in some cases it was absent from the

[2] On Epidemic Varioloid Varicella in Jamaica: Transactions of the Epidemiological Society of London, vol. ii., p. 414.

face throughout; (*b*) the vesicles were mostly hemispherical, tense and ranging in size up to that of a split pea, showing in some cases slight umbilication, in some cases the fully developed vesicle resembling that of variola, in others that of varicella; (*c*) a pustular stage occurred only at times and does not seem to have been constant. This was followed by the formation of crusts, and these on separation left cicatrices which were still present when the cases were examined some months later. 6. The various stages of the eruption were observed at the same time closely associated on the same parts of the body. 7. The disease occurred equally in vaccinated and unvaccinated subjects, as well as in those who were deeply pitted by antecedent small-pox. Dr. Anderson's description contains symptoms not observed in the cases which came under observation at the Belvidere Hospital. In his patients (1) the date of appearance of the eruption as stated in his paper is a little indefinite, but it seems in some instances to have appeared in the course of the third day; (2) no mention is made of the persistence of papules and the whole of the eruption is said to have vesiculated; and (3) a true pustular stage seems to have been observed (the nearest approach to this among the cases here dealt with was a sero-purulent condition of the contents of some of the eruptive elements). From Dr. Anderson's statement that the pustules ruptured and in some cases gave rise to superficial sores it is quite possible that the purulent condition may have resulted from secondary infection by pyogenic organisms; but, on the other hand, it must be remembered that as Dr. Anderson observed 115 cases it is likely he would have had the opportunity of noting greater variation in the type of the rash than ourselves. A due comparison of the clinical features observed in these cases by us with those set forth in Dr. Anderson's paper warrants the belief that the disease is neither variola nor varicella, but is probably a third disease of a specific character presenting resemblances to both, while at the same time it possesses certain features which entitle it to be placed by itself as a specific entity and bearing the same relation to both the diseases mentioned as exists between the more familiar forms of small-pox and chicken-pox. It is, of course, possible that the condition may be merely a modification of varicella the result of racial difference, and Dr. Anderson gives no clue in his paper as to whether the disease limited its attacks to the dark race or involved the white population also, but as he refers to cases occurring in his private practice similar to those which he observed in the prison and penitentiary it is quite likely that whites as well as negroes were victims of the disease. If this inference be correct then the argument that the disease is merely a modified varicella due to racial conditions must fall to the ground, although in connexion with this point it must not be overlooked that climatic rather than racial conditions might result in modifying varicella at least to some extent. Our opinion, based upon observation of a large number of cases both of variola and varicella, is that almost certainly the disease should be regarded as a specific entity. This conclusion, if correct, would explain certain peculiarities from time to time reported as occurring among small-pox patients in the East — e.g., susceptibility to vaccinia after passing through what is supposed to have been an attack of small-pox as well as other somewhat anomalous conditions with which we in this country are unfamiliar.

Glasgow.

THE STERILISATION OF CATGUT BY DRY HEAT.

BY J. H. DAUBER, M.A., M.B., B.CH. OXON., M.R.C.P. LOND.,
PHYSICIAN TO THE HOSPITAL FOR WOMEN, SOHO.

IN the issue of THE LANCET of Oct. 1st Mr. Mayo Robson drew the attention of the profession to his method of sterilising catgut by boiling it in di-methyl-benzene and thence transferring it before use either to a 5 per cent. solution of carbolic acid or to methylated spirit. As the details are not known to everyone I should like to mention another method of sterilisation—i.e., that by dry heat, which also has the merits of simplicity and efficacy. It is much in vogue on the continent and also I believe in America. (Boxes and sealed tubes of dry sterilised catgut can be purchased at many instrument makers in this country, but personally I have a preference for using, in a matter of such importance, an article the preparation of which need not be taken on trust.)

The following is the method of sterilising catgut adopted by Professor Tscherning of Copenhagen, who recently very kindly showed me the details observed by himself in its preparation at the Kommune Hospital in that city. The ordinary commercial catgut as it comes from the manufacturer is placed on trays in the steriliser between sheets of cellulose paper. It is then heated for six hours consecutively, for the first hour at a temperature of 60° C., for the second and third hours at 100° C., and for the fourth, fifth, and sixth at 140° C. It is then removed, wrapped up and closely sealed in an envelope of cellulose paper which is again placed in another envelope of slightly larger size and similarly closed. The catgut now encased within two firmly sealed envelopes is a second time placed in the steriliser and subjected for another two hours to a temperature of 140° C. The envelopes are placed in racks in the steriliser and contain various sizes of catgut labelled on the outside, some of a size for ligaturing the pedicle in ovariotomy, others for fine buried sutures or other purposes where absorption is desired within a short period. These envelopes can be taken from the steriliser and placed in the pocket or bag of the operator and need not be opened until the time of operation. Thus they are very handy and portable. It is to be remembered that catgut ligatures prepared by any of the wet methods become, if kept in spirit for any length of time, hard and need more time for absorption. If, on the other hand, they are kept in an antiseptic aqueous solution they tend to become soft and lax, whereas if kept in any preparation of glycerine they are somewhat difficult to manipulate owing to their extreme slipperiness. The dry catgut is without these disadvantages. The method of raising the temperature by slow degrees prevents the catgut becoming brittle—the grease and oil in the gut being driven off gradually at the lower temperatures.

Charles-street, W.

REMOVAL OF A CALCULUS FROM THE COMMON BILE DUCT 2 IN. LONG AND 3½ IN. IN CIRCUMFERENCE WITHOUT SUTURING THE DUCT.

BY H. J. THORNTON, L.R.C.P. LOND., M.R.C.S. ENG.,
FORMERLY HOUSE SURGEON TO THE MIDDLESEX HOSPITAL; SURGEON TO THE PASSMORE EDWARDS COTTAGE HOSPITAL, ACTON.

THE patient was a man, aged fifty-eight years, a gold prospector by trade, and was one of the early pioneers of the Western Australian goldfields. He was a man of splendid build, spare in frame, strong, and active. His life had been full of hardship from rough food, bad water, &c., on his travels. Except accidents he never suffered from any serious illness until four years ago, when being in Adelaide he began to get attacks of pain, vomiting, and slight jaundice. These occurred often at intervals of only a few days, sometimes weeks. Sometimes after attacks he passed small gallstones by the bowel. The pain was so severe that he had to have hypodermic injections of morphia, and it was so continuous about two years ago that he became reduced to an extreme degree of emaciation. After undergoing rest and medicinal treatment at a hospital in Melbourne, with careful diet, he improved a good deal, but the attacks still recurred at longer intervals, and just previously to coming to England twelve months ago they became of daily occurrence. He stated that he could not prevail upon the Australian surgeons to operate, so he determined to come home. On examination there was distinct tenderness and a sense of obscure fulness over the region of the gall-bladder, but deeper than that organ. Although the patient was very thin, no enlargement of the liver or gall-bladder could be detected on palpation or percussion. The patient was jaundiced, having recovered from a severe attack of biliary colic only a few days previously. As the history seemed so plain it was determined to open the gall-bladder and to explore the cystic and common bile ducts.

Mr. Bland Sutton, assisted by myself, chloroform being administered by Mr. Owen Coker, made an incision from the margin of the ribs on the right side down in a line with the outer border of the rectus muscle, about 3 in. in length, and the peritoneum was incised. There was no enlargement of the gall-bladder but a small stone could be felt in it. The gall-bladder was opened and this was removed. It was quite loose in the viscus. Behind the gall-bladder, underneath the liver could be felt indistinctly a large resisting body in the situation of the common bile duct. The abdominal wound was enlarged, the liver was pulled up as high as possible, and the pylorus was pulled aside. After cautiously working down with the finger Mr. Bland Sutton came on the greatly distended common bile duct, and in this, just past the opening of the cystic duct, was felt a large stone. Strong efforts were made to push it back into the gall-bladder or onwards into the bowel, but, owing to its size, without avail. An incision about 1½ in. long was made in the long diameter of the duct and the stone was easily expressed. It was composed of cholesterin, was 2 in. long and 3½ in round, was quite smooth, ovoid in form, and weighed 7 drachms. There was but slight bleeding. The incision in the duct was not sutured. A large indiarubber drainage-tube was put in down to the bottom of the abdominal wound, the gall-bladder was closed and stitched to the parietes, and the abdominal walls were closed by three layers of sutures—fine silk for the peritoneum, silkworm gut for the muscles and fascia, and silk for the skin and subcutaneous tissues. It was dressed with the usual antiseptic dressing. After the operation the patient suffered a good deal of pain, which was relieved by small hypodermic injections of morphia for the first twenty-four hours. The temperature never rose above 100° F. and the pulse kept good. There was for the first three days a profuse discharge of bile, at least 2 or 3 pints daily, requiring frequent dressing of the wound. The tube was gradually shortened and it was removed altogether in about seven days. There was no discharge of bile after the third day. The abdominal wound closed by first intention and the patient made an uninterrupted recovery, with the exception that several of the buried silkworm gut sutures caused small abscesses and were gradually in the course of some months brought to the surface and removed quite undissolved. Since the operation he has never had another attack of biliary colic. He has gained 3½ st. in weight and can eat any ordinary food with impunity. The scar is firm and strong and there is no ventral hernia.

Acton, W.

A CASE OF PYÆMIA TREATED WITH INJECTIONS OF ANTI-STREPTOCOCCIC SERUM.

BY HERBERT M. RAMSAY, F.R.C.S. EDIN.

A GIRL, aged fourteen years, developed measles on Feb. 27th, 1898. She went on well, it appeared, until March 3rd, when, at about 4 A.M., she complained of pain in the right ear. The pain continued to get worse, the child throwing herself about in bed all through the day and night of the 3rd. On the morning of the 4th the pain got better and the nurse noticed some discharge from the ear. In the evening the temperature was 104° F. and the patient complained of pain behind the ear. I saw her for the first time on the evening of the 5th, when her temperature was 105°. She had had a "shivering fit." Her pulse was 120, the respirations were 24, and she was very restless. There was some pain behind the right ear, but this was not increased by pressure and there was no redness or swelling there. On examining the ear I found the meatus filled with inspissated pus and débris and on clearing this out the membrane was seen to be white and sodden and there was a perforation situated at the anterior and inferior part of the membrane. After this her temperature fell to 103° and she had some sleep. The ear was ordered to be kept syringed out with a perchloride of mercury lotion (1 in 4000) and a 2-gr. pill of quinine was directed to be given every six hours. When I saw her again on the evening of the 6th the patient's temperature had gone up to 104° again, her pulse was 120, and the respirations were 26. I found that the meatus was again blocked with pus and after cleaning this out her temperature fell during the night to 99° and there was a profuse discharge from the ear. In spite of her ear being kept well syringed her temperature rose on the evening of the 7th to 105°. Her pulse was then 130, the respirations were 30, and some dulness was detected at the base of both lungs. She still complained of pain behind the ear and the tip of the mastoid was very tender on pressure. On the 8th her temperature kept at about 103° and there was free discharge from the ear. She was restless and sick several times after food, but there was no delirium. The quinine was increased to 2 grs. every four hours and she was given a drachm of brandy with each quinine pill. Mr. Bowlby saw the patient with me on the evening of the 8th, and we decided that there was no immediate indication for opening the mastoid cells. Her temperature was then 105·4°. She complained of pain at the tip of the mastoid, and this spot was tender on pressure, but there was no pain or tenderness over the mastoid cells and no headache. She was restless but she had no cerebral symptoms and there was no tenderness over the course of the jugular vein. She had been sick several times after her food and she had had a slight rigor. She slept fairly well and was better on the 9th, but there were patches of dulness all over both lungs, with fine crepitation and tubular breathing. She had a slight cough but very little expectoration. Her temperature in the evening was 104·6°, her pulse was 104, and the respirations were 32. On the morning of the 10th her temperature was 99° but it rose again in the afternoon to 104·4°, when Mr. Bowlby again saw her with me. The patient was now very ill and it was decided to open the mastoid cells, which was done at 4.30 P.M., when Mr. Willett administered the chloroform. Mr. Bowlby opened the mastoid cells and found nothing there except some muco-purulent secretion, but not sufficient of this to account for the high temperature, so no attempt was made to open up the tympanum. The skull was then opened but the dura mater did not bulge and the lateral sinus was evidently not occluded and the wound was therefore closed. The patient took chloroform well and she went to sleep after ½ gr. of morphia had been injected subcutaneously. Her temperature rose to 105° in the evening, but on the morning of the 11th it fell to 99·4° and she seemed to be much better. In the afternoon, however, she had a slight rigor and her temperature rose once more to 105°. The respirations were 38. On the 12th she was troubled a good deal by cough and had some purulent expectoration. Her temperature in the morning was 96·4° and in the evening it was 104·4°. She had well-marked pneumonia in patches over both lungs. Her condition on the 13th and 14th was much the same. The patient was troubled by cough and she was restless and took her nourishment badly. On the night of the 14th she slept very little and complained of pain in her right wrist and hand. The temperature on the morning of the 15th was 101·4°. The right wrist being swollen and very painful it was dressed with belladonna and glycerine and put up on a light cardboard splint. The wound behind the ear was almost healed. She had a rigor in the afternoon and her temperature went up to 104°. On the 16th and 17th the patient was very ill. She had frequent rigors and her temperature ranged from 96° to 105°. She was very sick and restless. On the 18th the morning temperature was 96°, the pulse was 120 and very weak and the respirations were 32. She was constantly sick and took no notice of anything.

Dr. Herringham saw the patient with me at 6 P.M. on the 18th. Her temperature was then 104° and though the lungs were clearing up she still seemed very ill. It was decided to try injection of anti-streptococcic serum and Dr. Herringham accordingly injected 5 c.c. into the loin. For a short time she complained of pain at the site of the injection, but this soon passed off and she slept well and more naturally. The blood was examined and was found to contain numerous streptococci and a few staphylococci. There were streptococci in the sputum but no organisms were found in the discharges from the ear. On the 19th the patient had three injections of 10 c.c. each of serum at 8.30 A.M., 1 P.M., and 6.30 P.M. She seemed to have improved and she took her nourishment better. The urine was examined; it contained no albumin. On the 20th and 21st she had three injections each day, at 8.30 A.M. and 1.30 and 6.30 P.M. She was now decidedly better, but though she had no rigors her temperature remained high in the evening, though it was lower than it had been. The lungs were clearing up well

and she slept better. She was not sick and she took her nourishment more freely. There was no trace of albumin in the urine. On the 22nd her temperature in the morning was 98·6° and in the evening 102·5°. The pulse was 100 and the respirations were 26. As she was so much better and as, being a very nervous child, the thought of the injections distressed her so much, it was decided to discontinue them. The specific gravity of the urine was 1020 and there was a trace of albumin. On the 23rd she was much brighter and better and she took her nourishment well, though her temperature in the morning was 95° and in the evening 101·8°. The wrist was much better and she was able to leave off the splint. On the 24th the patient was not so well and her temperature was 102·4° in the evening. The urine contained no trace of albumin. She was given an injection of 10 c.c. of serum at 6.30 P.M. On the 25th she had three injections of 10 c.c. each and she again seemed better. Her temperature was still very low in the mornings and high in the evenings (104°), but her general condition was much improved. She complained of pain in the left buttock, where there was some fulness but no definite lesion could be made out. Belladonna and glycerine and hot fomentations were applied. On the 26th, 27th, and 28th she had one injection each day of 10 c.c. and she seemed to be steadily improving, though her temperature ranged from 104° to 95°. On the 29th she was not so well, her temperature was 102·4°, and two injections each of 10 c.c. were given at 8.30 A.M. and 6.30 P.M. On the 30th she was better, but she still complained of pain in the left buttock. She was given an injection of 10 c.c. at 8.30 A.M. and this was the last administered as the blood on examination showed no micrococci. Her temperature still varied from 95° to 104° but she ate and slept well. The chest was quite clear and the pulse was good and steady. On April 3rd and 4th she complained a good deal of pain in the left buttock and was quite unable to lie on that side. There was fulness, and as the skin was so tender that it was quite impossible to examine the place it was decided to put her under an anæsthetic for that purpose and this was done on the 7th. Fluctuation being detected Mr. Bowlby cut down and opened a large abscess situated beneath the glutei and evacuated about 10 oz. of pus. A counter opening was made and a large drainage-tube put in. Her temperature rose to 105° in the evening but she slept fairly well. On the 8th the patient was very sick all day and also on the 9th, on the evening of which day her temperature rose to 105·6°, her pulse was small (130) and running, and her respiration was shallow. She was very restless and delirious. The abscess was dressed but there was apparently no retention of pus and nothing to account for her condition. Morphia (⅛ gr.) was administered subcutaneously, and after this she became quiet and slept for the greater part of the night. On the 10th she was much better, the sickness being less. There was little discharge and the wounds looked healthy. The temperature in the evening was 103·8 and she slept well. On the 11th her temperature did not rise above 100° and she was much better, but she had œdema of the right eyelid and the right side of her forehead. She took her nourishment well and with an appetite. From this time the patient continued to improve; the œdema of the eyelid disappeared and she was well enough to go to the country on April 23rd with the wounds almost healed. The drainage-tube was taken out on April 14th as there was no discharge. The patient was last seen on June 5th, when she had quite regained her strength and the hearing of the left ear was much improved. The perforation was healing, the site of the abscess in the buttock was quite sound, and the wrist was quite well.

The interest in this case lies in the great improvement manifested in the patient's condition after the serum treatment was commenced. The temperature did not fall though the average altogether was lower than before the injection but the continued high temperature was accounted for by the presence of the abscess in the buttock. When this was evacuated the temperature almost immediately fell to normal. In spite of the temperature being high the patient's general condition improved markedly. From the time the injections were commenced she slept better, took her nourishment better, and was altogether more natural. The wrist cleared up, her pulse improved, and she was brighter and better, whereas before she seemed in an almost hopeless state. This improvement was, I think, shown to be due to the anti-streptococcic serum treatment, as when for two days the injections were discontinued (from 8.30 A.M. on March 22nd till 6.30 P.M. on March 24th) she was manifestly not so well, and she improved again with the recommencement of the injections. Another point of interest is the complete disappearance of the organisms from the blood within twelve days of the commencement of the treatment. It is also interesting to note that streptococci were demonstrated in the blood and anti-streptococcic serum was used, as I think some cases of failure when anti-streptococcic serum has been tried may have been due to the organisms not having been streptococci. Altogether 205 c.c. of serum were injected by Dr. Herringham, to whom and to Mr. Bowlby my best thanks are due.

Hertford-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

SUDDEN AND COMPLETE INVERSION OF THE UTERUS AND CERVIX AFTER THE MENOPAUSE; VERY SMALL FIBROID NODULE IN THE FUNDUS; GANGRENE; OPERATION; RECOVERY.

BY JAMES OLIVER, M.D., F.R.S. EDIN., F.L.S.,
PHYSICIAN TO THE HOSPITAL FOR WOMEN, SOHO-SQUARE.

THE patient was a widow, aged fifty-eight years, who had had six children and three miscarriages. The last child was born twenty years ago and the miscarriages occurred prior to that time. The menstrual discharge, which had always been rather profuse, ceased twelve months ago. During the last three months the patient had observed a slight and constant hæmorrhagic discharge from the vagina and had experienced occasionally "a feeling as though something were coming down in the front passage." Fourteen days ago there suddenly protruded from the external genitals a lump. The presence of this lump had been associated more with a feeling of discomfort than of pain and with the support afforded by a diaper the patient had performed her household duties as usual. Since the lump appeared the discharge had greatly increased and had become purulent and during the last four days it had been extremely offensive. There had been no bladder symptoms, neither had there been any disturbance of the rectum. There protruded from the external genitals a very sloughy mass which emitted an offensive odour and was composed of three lobes. The lower lobe, which was of the size of a walnut, was solid, the middle one, which measured roughly 3 in. vertically, had a somewhat cystic feel, whilst the upper one, which measured vertically about 2 in., had a membranous feel. Immediately above the upper limit of the mass the vaginal mucous membrane displayed anteriorly a dusky red line of demarcation, which extended a little way laterally but was absent altogether posteriorly. In the right lower half of the middle lobe, about an inch above the base of the lower lobe and slightly anteriorly, a small depression was discovered, into which a probe was passed for nearly an inch. As, however, it caused free hæmorrhage no attempt was made to pass it further, but it was evident that this was the uterine opening of the right Fallopian tube. The mere manipulation of the tumour caused free oozing of blood from the depression between the middle and upper lobes. Posteriorly this depression, which marked the level of the internal os uteri, was almost obliterated. The bladder sound passed straight up towards the pelvis and could not be made to descend towards the vaginal mass; the bladder retained, therefore, its normal position. The body temperature was 101° F. and the pulse numbered 90 per minute, but the patient otherwise appeared to be in good health.

The tumour and vagina were thoroughly washed with suds made from sapo mollis and afterwards douched well with carbolic lotion. The mucous membrane of the vagina was incised transversely immediately above the dusky red line of demarcation, and this incision was extended in depth until the peritoneum was reached. The peritoneal cavity was then opened anteriorly but sufficiently only in the first instance to allow of the introduction of the left forefinger. To prevent retraction of the peritoneum a fine

silk stitch was passed through the whole thickness of the tissues incised and was tied before the peritoneal sac was further opened. With scissors I carefully extended the incision to the right and left and again stitched the peritoneum to the mucous membrane of the vagina. The succeeding steps of the operation were similar to those adopted in vaginal hysterectomy, but it had to be borne in mind that the broad ligaments were displaced. After removing the tumour I closed the peritoneum with fine silk sutures. The ovaries were not removed. The temperature rose to 103° thirty-six hours after the operation, but the convalescence otherwise was most satisfactory and the patient made an excellent recovery.

The small sessile growth at the fundus was undoubtedly the exciting cause of the inversion in this case, yet it seems remarkable that it should have proved capable of this result after the menopause and so long after the birth of the last child. The tumour, although in a gangrenous state, was producing very little disturbance and the symptoms caused by it were so trivial that the patient did not seek advice until the odour of the discharge became practically unbearable. The peritoneal pouch, which measured about 5 in., showed no inflammatory change.

Gordon-square, W.C.

THE TREATMENT OF RINGWORM OF THE SCALP.

BY GEORGE STEELE PERKINS, M.D. EDIN., L.R.C.P. LOND., M.R.C.S. ENG.

MR. H. LYLE, in his paper on this subject in THE LANCET of Oct. 8th, points out the value of a simple method of treatment of chronic cases. For the past fifteen years I have treated every case of ringworm which has come under my care with chloride of sodium, and with complete success in every case. The first case in which I adopted this treatment was a chronic one of five years' standing. The child was well in three weeks and had no return. Many of the cases which I have attended since have been of a chronic character. The method I adopt is the following. Have some chloride of sodium finely powdered and then mixed with a little vaseline to make an ointment. The affected part having been shaved, rub this ointment in well night and morning until the place is sore; this takes from two to four days. Then apply some simple application to aid the healing of the part. When well from the soreness, the hairs will be found growing healthily and the tinea trichophyton destroyed.

Wimpole-street, W.

A CASE OF PUERPERAL SEPTICÆMIA.

BY HENRY K. DAWSON, M.D. DURH.

A HEALTHY countrywoman, aged twenty-five years, was attended by me in a normal labour on Oct. 25th, 1897. This (her fourth) confinement was of short duration and the placenta came away without any difficulty. The liquor amnii had escaped some days previously, since which time she had had, I was informed, more or less constant pain. On Oct. 27th there was a rigor and the temperature as recorded by a trained nurse rose to 102° F. During the next few days the temperatures were as follows: Oct 28th, morning, 103·8°; evening, 105 0°. Oct. 29th, morning, 101·4°; evening, 106·2°. Oct. 30th, morning, 103·0°; evening, 104°. Oct. 31st, morning, 102·0°; evening, 104·6°. Nov. 1st, morning, 103·4°; evening, 105·0°. From this date until Dec. 6th the temperatures showed a wide daily range, being almost invariably normal in the morning and varying from 101° to 103° in the evening. On and after Dec. 6th they were subnormal for five days and recovery was then established. The patient complained of slight pain in the left iliac region, becoming more severe for three or four days towards the latter part of the illness. The lochia remained healthy throughout, except that they occasionally contained some small shreds which were never offensive. The uterus continued large and tender to touch for some considerable time. Rigors were experienced every evening for nearly a month, of more or less severity. The tone of the pulse was good throughout, the rate rarely exceeding 100. There was no diarrhœa or sickness. The milk was not suppressed and the appetite remained good. The patient slept well, very little wasting took place, and the expression of the face could not be termed anxious. The patient's knees were never drawn up. On palpating the abdomen slight tenderness and some indistinct resistance were felt in the left iliac fossa. Per vaginam there was marked fulness in the left lateral fornix. The treatment adopted consisted of frequent intra-uterine douches of corrosive sublimate, the introduction of iodoform pessaries into the vagina, and 5 gr. doses of quinine every two or three hours. I regret that no bacteriological examination of the lochia or blood was made. Mr. Sumpter, of Sheringham, saw the case with me, and it was decided not to use anti-streptococcic serum, as the symptoms, with the exception of the temperature, were never urgent. The patient resumed her household duties at the end of February, 1898, with every appearance of good health. She, however, complained of some pain in the back.

Sheringham, Norfolk.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

LONDON HOSPITAL.

A CASE OF BLEEDING FIBROID IN WHICH ARREST OF THE HÆMORRHAGE AND SHRINKING OF THE TUMOUR FOLLOWED LIGATURE OF THE UTERINE ARTERIES.

(Under the care of Dr. G. E. HERMAN.)

THE anastomosis which exists between the branches of the uterine and ovarian arteries would have suggested that the collateral blood-supply after ligature of the uterine arteries would be great, but the effect in some cases at least produced by this ligature leaves no room for doubt that this collateral circulation is not established at all readily. Possibly some of the discordance in the results obtained in the treatment of fibroids by Martin's operation is to be explained by the ligature having included only one branch and not the main trunk of the uterine artery, as division occurs at some distance from the uterus. The two great arguments in favour of the operation are the absence of mutilation and the comparatively slight risk to life; these in themselves will be sufficient to render it a suitable operation in cases where patients or friends object to methods more likely to be followed by success. The effect in Dr. Herman's case was very striking and one such would outweigh many in which no benefit might result. For the notes of the case we are indebted to Dr. H. M. Rigby, resident accoucheur.

A patient, aged thirty-five years, was admitted into the London Hospital on Oct. 28th, 1897. She was married, but had never been pregnant. Her complaint was that for the last three years she had been "flooding" at intervals of about three weeks and for the last eight weeks she had been losing blood continuously. She complained also of pain in the right side and back. She had been treated for the hæmorrhage by ergot, but without benefit. On admission the patient was seen to be markedly anæmic. A movable tumour composed of hard rounded nodules was felt rising out of the pelvis and reaching to within three fingers' breadth of the umbilicus. By bimanual examination this tumour was found to be continuous with the cervix and with other masses felt behind and at the sides of the cervix. The uterus was as freely moveable as was consistent with its size, and the cervix was low down. On Nov. 3rd, the cervix having been previously dilated with tents, the interior of the uterus was examined, but it was found that no tumour projected into the uterine cavity. The patient was advised that the best way of stopping the hæmorrhage was by an abdominal operation—either removal of the ovaries, or of the tumour, or of both, according to what the operator might judge to be safest after the abdomen had been opened. However, she absolutely refused to undergo any operation which would deprive her of the possibility of

pregnancy. Dr. Herman therefore decided to tie the uterine arteries. On the 10th a transverse incision was made through the vagina in front of the cervix, and with the fingers the bladder and ureters were separated from the uterus in front and the broad ligaments were opened up at its sides. When this had been done the uterine arteries could be felt pulsating. A ligature was passed over each from above downwards with an aneurysm needle and was tied. Oozing was checked by packing the wound with iodoform gauze. On Dec. 10th, one month later, the note was recorded that no hæmorrhage had occurred since the operation and that the uterus could be barely felt above the pubes. The patient menstruated after the operation about once in five or six weeks and not more copiously than was customary when she was in good health. She was seen last on July 5th, 1898, and then the uterus was not larger than at the end of the third month of pregnancy.

Remarks by Dr. HERMAN.—When the main artery of a limb is tied a collateral circulation is established so quickly that the nutrition of the part below is hardly affected. This consideration has made me think it so improbable that ligature of the uterine arteries would affect the nutrition of a fibroid that I have not before performed the operation, nor should I have done it in this case had not the patient refused more radical treatment. Ligature of the uterine arteries was first proposed and practised by Franklin H. Martin, of Chicago, in 1892, and the results reported from it[1] vary so considerably that it is difficult not to think that some of the observations must have been misinterpreted. But in this case there seems little room for doubt that dwindling of the fibroid and arrest of hæmorrhage have been produced by ligature of the uterine arteries, and should this be a frequent result of the operation it may prove very useful, for it has the obvious advantages of not mutilating the patient and of being attended with less danger than abdominal section.

DEVON AND EXETER HOSPITAL.

OLD TRAUMATIC DISLOCATION OF THE HIP; OPERATION; RECOVERY.

(Under the care of Mr. CHARLES E. BELL.)

A GREAT change has taken place during the last twenty years in the treatment of old dislocations of joints. The treatises on surgery used to contain time limits beyond which it was undesirable to attempt the reduction of a displaced bone, though cases were on record in which dislocations had been reduced several months after the infliction of the injury, but these were the exceptions until antiseptic surgery made it possible to operate on old dislocations without undue risk to the patient. At the present time every dislocation should be reduced (by an operation if necessary) unless the displaced bone has succeeded in obtaining sufficiently free movement in its new position or the age of the patient contra-indicates operative interference. In Mr. Bell's case the acetabulum was found to be filled with new tissue, and this would probably have prevented the head of the femur returning to its normal position, even if it could have been brought down by manipulation.

A boy, aged thirteen years, was admitted into the Devon and Exeter Hospital in November, 1897, with what proved on examination to be a dislocation of the head of the left femur on to the dorsum of the ilium. The patient, a strong, healthy lad, whilst he was playing football some five months previously was thrown as he was running; after this he was unable to walk and was therefore carried home. He was then put to bed, where he remained for about a fortnight. The hip was thought to be sprained and it was rubbed with liniment. When he was taken out of bed it was found that he could not stand, but nothing further seems to have been done until he was taken to the hospital nearly five months after the occurrence of the accident. As the leg was of no use to him, being much shortened and absolutely incapable of bearing any weight, the consent of the parents was obtained to the performance of an operation with the view of being able to return the head of the femur to the acetabulum. Accordingly, with strict antiseptic precautions, a free incision was made over the front of the great trochanter and all the muscles attached to this and to the shaft of the femur were separated subperiosteally as far as the lesser trochanter, and the head was lifted out of its new bed. The articular cartilage appeared to be quite good. The acetabulum was filled with new tissue and the remains of the capsular ligament. These having been removed with scissors and a scoop the cartilage appeared to be quite healthy. By steady traction and manipulation the head of the femur was replaced in the acetabulum, but it gave the idea of being somewhat too large for the cavity. All hæmorrhage having ceased the wound was washed out and closed with the exception of the opening for a drainage tube, which was put into the deepest part of the wound. A long splint was applied and the patient was put back to bed and a weight attached to the limb. The after-history was uneventful; there was practically no shock; some drainage of sero-sanguineous fluid occurred for a few days, but that was all. The temperature never rose and the boy slept and fed well. The splint was kept on for two months and then removed, the patient being allowed up on crutches. Since leaving the hospital he has been seen three or four times by Mr. Bell, the last occasion being on Aug. 8th, 1898. The boy had then perfect movement of the limb and could stand and walk well.

[1] Yearbook of Treatment, 1898.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Hypertrophy of the Lung.—Fatal Summer Diarrhœa with Acute Enteritis.—Acromegaly.—Accessory Parathyroid Body.—Squamous-celled Carcinoma from the Trachea.—"Butter Cyst" of the Mamma.—Bony Nodules in the Tonsil.—Primary Sarcoma of the Scalp.

A MEETING of this society was held on Oct. 18th, the President, Dr. PAYNE, being in the chair.

Dr. NORMAN DALTON showed a specimen of Hypertrophy of the Lung removed from the body of a man, forty-five years of age, who was admitted to King's College Hospital dying from pneumonia of the right lower lobe. Externally the chest appeared to be normal, but on raising the sternum the right lung was found to pass across the mediastinum and to reach up under the left clavicle and into the left mammary region concealing the pericardium. The left lung was found behind, small, shrivelled, and airless. The hypertrophy was found to affect the middle and upper lobes, the right being bound down by adhesions. There was not much emphysema. The trachea bifurcated at the usual position. The left bronchus almost immediately narrowed. The lower branch could not be followed far beyond the constriction, but the upper could be followed as a mucous track for some distance. The space between the aorta and the bronchus was occupied by glands. Dr. Dalton held that this was not an undeveloped fœtal condition but was due to obstruction slowly produced. Most likely the obstruction had been due to enlargement of the glands already noticed.—Dr. CURNOW, under whose care the patient had been, said there had been nothing in the signs during life to suggest the abnormality.

Dr. F. W. ANDREWES showed specimens from a case of Fatal Summer Diarrhœa with Acute Enteritis. The case was of interest because the unusually severe enteritis found received a probable explanation in secondary streptococcus infection of the bowel. A girl, aged nineteen years, in previous good health, was attacked in August last by ordinary diarrhœa, mild at first but becoming more severe, till on the evening of the second day she was admitted to St. Bartholomew's Hospital in a state of profound collapse from which she never rallied. The stools were small, colourless, and like rice-water. She died about 56 hours from the onset. At the necropsy the only lesion found was an intense enteritis; the mucous membrane of the whole jejunum and ileum was of a vivid crimson colour and the solitary follicles stood out very conspicuously. There was no ulceration. The specimen shown had been prepared with formalin. Dr. Andrewes said that so intense an enteritis was not often seen in fatal "cholera nostras." Commonly there was little evidence of inflammatory change in the bowel to be seen after death. The causation of summer diarrhœa was still

unsettled, though it was almost certainly of microbic origin. The researches of Dr. Klein had given considerable grounds for associating his "bacillus enteritidis sporogenes" with the disease. Whether this be so or not there was in this case evidence of a streptococcic infection of the bowel which was probably superimposed upon the primary cause of the diarrhœa. Bacteriological investigation of the intestine and its contents gave the following results. The spirillum of Asiatic cholera was absent. Bacillus enteritidis sporogenes was present in a very virulent form, a culture being fatal in thirty-two hours to a guinea-pig which was injected. The chief organism present in the stools was a streptococcus. Sections of the intestinal wall stained by Gram's method showed in the necrotic mucosa small numbers of bacillus enteritidis sporogenes and streptococci. The streptococcus was obtained in pure culture and was not certainly identical with streptococcus pyogenes. Microscopic specimens of the intestinal wall and of the fæces were shown.

Mr. S. G. SHATTOCK exhibited an Acromegalic Skull from the collection of modern Italian crania purchased by the Royal College of Surgeons of England in 1870 from Dr. Liccolucci. Though placed by Sir William Flower amongst the normal crania it was noted at the time as massive and rugged. There was no difficulty in recognising it now as one of the acromegalic type. The changes in the bones were associated with very considerable enlargement of the pituitary fossa, proving the existence of a pituitary goitre. The parietal bones, where thickest, measured ¾ in. (2 cm.). In some examples of acromegaly the thickening had been classed as hypertrophic, but in the present case all distinction between tables and diploe was lost and the change could not be classed as one of hypertrophy in the strict or academic sense; its texture was indistinguishable from that of a calvarium thickened and sclerosed in the later stages of osteitis deformans. One of the most characteristic features was the lengthening of the face due especially to the enlargement of the lower jaw and notable prominence of the chin (cranium progeseum of anthropologists). About 40 per cent. of giants were stated (Maximilian Sternberg) to be acromegalic. Certain writers had alleged that gigantic stature was in all cases associated with, or due to, pituitary disease arising during growth—i.e., that all giants were acromegalic. This was untrue. There were normal and pathological giants as there were normal and pathological dwarfs. Besides the dwarfing of cretinism due to disease of the thyroid there were short-limbed dwarfs who were not cretinous, and dwarfs, thirdly, who were proportionally small throughout. In the College Museum there were the skeletons of two giants. One, 6 ft. 9 in., that of "Freeman the American Giant," presented obvious prognathism, but the bases of the skull were in no degree thickened and the pituitary fossa was not in the least enlarged, its antero-posterior diameter being only 1·4 cm. (⅝ in.). But the Irish giant (Charles Byrne or "O'Brian," 7 ft. 7 in.) the speaker viewed, with Dr. D. J. Cunningham, as an acromegalic. The lower jaw was massive and the chin was particularly prominent, the glabella was very projecting, and the cranial bones were dense and thickened. The pituitary fossa measured over 2 cm. antero-posteriorly. The capacity of the skull was 1520 cm.; that of the acromegalic Roman skull was 1500 cm., whilst that of the normal giant was by contrast 1630 cm. This Irish giant was not to be confused with that in the Museum of Trinity College, Dublin (Cornelius Magrath), which Cunningham in 1891 showed to be acromegalic. The Irish giant referred to in Sternberg's monograph was that in Dublin, not that in London.—Dr. CURNOW mentioned that there was a skull in King's College Museum supposed to be that of an Australian native. He himself, however, had always been doubtful as to its real nature and believed from its prognathism, thickening of the frontal bones, and the condition of the sutures that it was an acromegalic skull.

Mr. S. G. SHATTOCK also exhibited a specimen of Accessory Parathyroid in the Human Subject, with complete microscopic sections. The body was of about the size of a small pea, which was found loosely hanging from the lower region of the thyroid isthmus in a man, twenty-two years of age, who died from intussusception. Histologically this was a most perfect example of parathyroid tissue and consisted of columns of cells ramifying in a close capillary mesh and showing nowhere any trace of lumen or of colloid. Such accessory bodies were to be distinguished from accessory thyroids; they were accessory parathyroids. He was induced to show it in consequence of the importance the subject of parathyroid tissue had attained. In the thyroid of the adult he had seen small flattened islands lying at the surface and far removed from the situation of the parathyroids described in them by Sandström, and especially more recently by Welsh, the latter glands being two on either side at the lower part of the lateral lobes about the site of the inferior thyroid artery. The subject was complicated by the fact that at times in the lower animals, but not rarely in man, it had been found that the parathyroids contained also thyroid tissue. So unlike were the islands he had seen—e.g., on the anterior surface of the lateral lobe—that he could not help suspecting parathyroid tissue in man was more extensive than that comprised in the parathyroids alone.

Dr. LAZARUS-BARLOW showed the Trachea of a man, aged fifty-six years, into which a Squamous-cell Carcinoma had perforated. The point of difficulty had reference to the seat of origin of the growth. The growth was of about the size of a small Tangerine orange and lay obliquely in front of the trachea between the lower margin of the thyroid gland and the upper margin of the remains of the thymus gland. During life it was almost entirely covered by the manubrium sterni. The seat of perforation was in the middle line of the trachea about 1¼ in. above the bifurcation. There was strong probability that the growth was primary in this situation, firstly, because nodules found in the cervical glands—especially on the right side—were much smaller; and, secondly, because there was no new growth visible in the tongue, mouth, or œsophagus. Neither was the skin anywhere implicated. The possible explanations were that the growth had arisen either in connexion with an accessory thyroid body, or with a remnant of the thymus gland, or with the trachea, or with a fœtal remnant of squamous epithelium included in the deeper tissues during closure of a branchial cleft. Against the view that it was of thymic origin was the fact that no Hassall's corpuscles could be found in the peripheral part of the growth. Against the views that it arose in the trachea was the fact that its structure was undoubtedly that of a squamous-cell epithelioma. Against the view that it arose from a fœtal inclusion of squamous epithelium during closure of a branchial cleft was the impossibility of proving the point. On the whole, however, Dr. Lazarus-Barlow thought that the latter view was most probable.—Mr. SHATTOCK said that if the tumour were really primary it probably grew as suggested from a branchial cleft, although it was rather low down for such an origin. The lower branchial cleft was developed from the pharynx at one end and the skin at the other. Had the squamous epithelium any stratum granulosum, as would be the case if it arose from the epidermic end?—Dr. ROLLESTON thought that it was possible the tumour might have arisen from the track of the depression in the visceral arch, which led to the development of the thymus in which the squamous epithelial structures were normally found. He had shown some years ago a specimen of spheroidal-celled carcinoma removed from the neck in relation to which no primary tumour could be discovered, and a similar case had been mentioned by Mr. Bowlby.—Dr. LAZARUS-BARLOW, in reply, said that the trachea was deviated and so the tumour was not really as mesially situated as at first sight appeared.

Mr. BETHAM ROBINSON showed a specimen of "Butter Cyst" of the Mamma which was removed in October, 1897, from the breast of a married women, aged twenty-five years, who gave the following history. Fifteen months before, three weeks after her first confinement, she suffered from an "abscess" of the right breast in almost the same situation as the present swelling. The breast became large, painful, and tender, especially at the upper and outer part. The inflammatory mass was punctured twice, not incised, and a considerable quantity of pus (?) was drawn off. Soon after the abscess had apparently healed she began to notice a small lump about the centre of her right breast. This quickly reached to the size of a Tangerine orange and had remained so. There was rarely any pain in connexion with it and no discharge from the nipple. On admission the lump, which was circular in outline, elastic, and about 2 in. in diameter, was situated above the nipple and showed at its inner part the scars of the two punctures. It was not tender. The gland on the inner wall of the axilla was distinctly enlarged. The lump with a margin of healthy gland structure round was removed as well as the enlarged gland.

The swelling proved to be a cyst with smooth walls filled with a yellowish-brown semi-solid substance of the consistence of butter. On histological examination of the cyst-wall there were gland lobules to be seen embedded in some excess of fibrous tissue; the lining membrane was epithelial, flattened, chiefly in a single layer, and not granulation tissue. The cyst contents hardened on exposure to the air; with ether the main part (the fatty portion) was soluble; the undissolved part microscopically consisted of protoplasmic masses, apparently fatty epthelial cells without leucocytes, and with this could be seen sheaves of circular crystals, probably stearin. The condition, therefore, was a galactocele, but modified to this extent that the watery constituents had become absorbed, leaving only the more solid part behind. It was possible to get such retained products quite hard, dry, and friable, resembling very much old cheese. Such a case was shown by Mr. Wickins-Pitchford and recorded in vol. xlvii. of the Transactions, p. 250. Here the milk had been retained in dilatations associated with fibroid change in the breast and gradually lost all its watery elements; the "cheesy" material was proved to be chiefly fatty.

Dr. HUGH WALSHAM exhibited: 1. Bony Trabeculæ and Nodules in the Tonsil of a man, sixty years of age, who died from phthisis. There was nothing to indicate the condition during life. 2. Cartilaginous Nodules from the Tonsil of a young man also found after death. It seemed most likely that they were derived from some branchial cleft, but Dr. Kanthack, who had seen the specimens, regarded them merely as instances of metaplasia of fibrous tissue.—Mr. J. H. TARGETT mentioned that he had found bony nodules in the corium of the scalp.—Dr. ST. CLAIR THOMSON asked if the bone and cartilage might not come from the tip of the styloid process, which in some people reached right down to the tonsil.—Mr. SHATTOCK agreed that the nodules were derived from a branchial cleft and reminded Dr. St. Clair Thomson that the styloid process and its ligament represented one of the branchial clefts.—The PRESIDENT thought the cartilage and bone were most likely derived from some part of the skeleton, as suggested by Dr. St. Clair Thomson. Osteoma of the skin was very rare.—Dr. WALSHAM, in reply, said the nodules were multiple and so could not represent the tip of the styloid process.

Mr. P. DE SANTI exhibited specimens of Primary Sarcoma of the Scalp. The patient was a young woman. A lump was noticed in the right side of her scalp when she was a year old. They became more numerous, but varied in size for some years. They were removed in 1891, again in 1897, and in 1898, the growths having recurred, they were removed with the exception of two or three near the sterno-mastoid. The patient died a few months later from extensive secondary deposit in the lungs.

Dr. R. G. HEBB showed sections of Actinomycosis of the Tongue removed from a sailor sixty years of age. The lump was of the size of an almond, an inch behind the tip. It was excised and the centre was yellow and cheesy. Sections of the wall showed chiefly small-celled infiltration, but here and there were typical groups of the ray fungus.—The PRESIDENT remarked on the rarity of actinomycosis of the tongue in man, although it was so common in cattle.

CLINICAL SOCIETY OF LONDON.

President's Address. — Myositis Ossificans. — Congenital Cardiac Lesions in Mongolian Idiots.—Erythema Enematogenes.—Pin in the Vermiform Appendix.

THE first meeting of the present session was held on Oct. 14th, the President, Mr. LANGTON, being in the chair.

The PRESIDENT thanked the society for electing him to the chair a second time. He referred to the prosperous state of the society, which now had a membership roll of 588, and the financial position was fully secured. Of the 129 original members only 40 now remained. During the past year two original members had died, Sir Richard Quain and Dr. Ramskill. An index volume referring to the first 30 volumes of the society had been edited by Dr. Archibald Garrod and was a model of accuracy and completeness. The President presented the new volume of the Transactions of the Society and remarked on the value of the report on the antitoxin treatment drawn up by a committee under the presidency of Dr. Church. The society had always encouraged the observation and recording of facts. But the President wished to point out that observation required to be supplemented by skill in marshalling facts. In his later days Hunter insisted that theory should guide the record of observations. In their records observers should exercise a little scepticism both as to the accuracy of their own observations and as to the correctness of statements made by patients. Referring to the association between medicine and surgery the President said that there had been occasional efforts to separate them. At St. Bartholomew's Hospital in 1662, for instance, the governors decreed that "the apothecary do not prepare or dispense any medicines except such as be ordered by the physicians." Later a relaxation was made, the surgeons being allowed to prescribe mercurials and purges only. The papers read during the last session, especially those on abdominal diseases, showed how often the fields of the physician and surgeon overlapped. Referring to the question of the treatment of perforated gastric ulcer the President said that he thought all would agree that early operation gave the only chance. He preferred to sponge out solid matter as far as possible and then flush the abdominal cavity with sterilised water. He was inclined to think favourably of the proposal by Billroth and others to excise the ulcer before perforation if its presence could be diagnosed with any degree of certainty. This would especially refer to ulcers on the anterior wall. Deaths took place in considerable numbers in the London hospitals from this condition; the patients were usually young women or males of middle age. The operation itself would not now involve very great danger.

Dr. W. P. HERRINGHAM narrated a case of so-called Progressive Myositis Ossificans. The patient, a girl, now aged eight years, was shown as a living specimen to the society three years before by Mr. Owen Paget.[1] Rigidity was first noticed about the shoulders at two years of age. At five years of age swellings appeared in the back for which she saw Mr. Paget. The swellings were large at first, but disappeared under treatment. They were attached to the ribs and were probably fibrous in character. The shoulders were then rigid owing to ossification of the pectorals and latissimus dorsi and the head was fixed from rigidity of the sterno-mastoids, which were swollen. Microdactylia of the big toes was also noticed. At the present time the back had become more rigid so that the whole spinal column moved like a rod; a considerable bony prominence was found behind the left mastoid process; there were bony nodules springing from the ulna on both sides, which on the right arm limited supination; the thumb was small and imperfectly abducted; there was an exostosis on the first phalanx of the right middle finger. A pencil of bone was found in the right abdominal muscles running from the anterior superior spine of the ilium to the ninth costal cartilage and another was in the sheath of the right rectus abdominis. There had been pain lately about the right hip and its movements were not quite so free as those on the left side. The right biceps femoris tended to contract, but could be extended by force. Skiagrams showed the right shoulder-joint to be natural, the bony deposit being in the muscles alone. The deformity of the great toe was complex. The epiphysis of the first phalanx was thicker on the inner side; the first phalanx, somewhat tilted by this to the outer side, was itself thickened; the unequal phalanx was apparently joined to its head by synostosis, and was set on obliquely, pointing again outwards. The nail was perfect. The lesions of the disease were confined to the somato-pleural layer of the mesoblast, and in this to the bones, periosteum, and connective tissue only. The muscle was affected by secondary atrophy. Its pathology was uncertain. It was congenital and not hereditary. Of exciting causes injury alone had been sufficiently proved, and this in rare cases only. Males suffered more than females. There was no adequate evidence of any connexion with rheumatism or rheumatoid arthritis. The view of Pincus that it was a form of new growth appeared the most reasonable, and parallels might be drawn between this disease and multiple fibroma. It was not impossible that this anomalous disease might throw light on the pathology of tumour formation. The name was unfortunate, but must be retained until the pathology was more certain.—Mr. CAMPBELL WILLIAMS asked Dr. Herringham if he considered that the "chill" mentioned in the history was an attack of rheumatism. He had seen a case of an adult some time ago in Australia in which an attack of rheumatism preceded the appearance of the disease.—The PRESIDENT

[1] Transactions of the Clinical Society of London, vol. xxix., p. 221.

asked if the condition improved when the child was kept resting in bed.—Mr. W. G. SPENCER observed that ossification after rheumatism or injury was not so very rare. In Dr. Herringham's case, however, the disease appeared to be congenital, and this was confirmed by the deformity of the toes. He regarded the disease as a congenital irregularity of ossification. In certain birds this condition occurred normally, ossification extending into the tendons from the periosteum.—Dr. HERRINGHAM, in reply, agreed with Mr. Spencer as to the pathology. He thought the congenital irregularity in development which most regarded as the origin of tumour formation was perhaps a parallel condition. The ossification might occur, not only in muscles and tendons, but independently in the inter-muscular septa. He did not see why a chill should not start the disease in a person congenitally predisposed in the same way as an injury might, but he did not think there was any special relation to rheumatism. The patient's condition did improve when she was kept at rest.

Dr. ARCHIBALD GARROD briefly described 5 cases which had come under his notice in which Congenital Cardiac Lesions were met with in Association with the Mongolian Type of Idiocy. He expressed the belief that there was a specially close association between these two varieties of congenital defect although structural malformations of other kinds were not unfrequent in children with malformed hearts. Dr. John Thomson in a recent paper on the Types of Idiocy had mentioned the occurrence of congenital heart disease in three children of the Mongolian type, but inquiry of physicians with large experience of idiot children showed that the association was not a familiar one in asylums. This was very probably due to the failure of these children to survive to the age for admission to such institutions. Dr. Garrod's patients and those of Dr. Thomson were all below the age of five years. In several instances death occurred at an early age. With one exception the patients were girls. Congenital cardiac lesions were occasionally met with in idiots of other kinds, but in Dr. Garrod's experience much less frequently than in "Mongols."—Dr. A. M. GOSSAGE mentioned a case in which there were signs of congenital heart disease at the age of eight months and later the child showed the typical Mongolian type of idiocy.—Dr. GUTHRIE had examined the heart in two cases of the kind described by Dr. Garrod. One was that of an infant, eight months old, who had a loud systolic murmur but was not cyanosed. She became dropsical before death and it was found that there was an imperfect septum ventriculorum and a patent foramen ovale. In the second case the right side of the heart was hypertrophied and there was a cribriform opening at the upper part of the ventricular septum. He agreed with Dr. Garrod that the children usually died before being old enough to enter the idiot asylums.

Dr. G. F. STILL read a paper on Erythema Enematogenes (Enema Rash) in Children. Very few cases of enema rash in childhood had been recorded, and although this variety of erythema was of little significance *per se* it became of considerable importance in children, inasmuch as it was very easily mistaken for some of the specific fevers to which childhood is particularly exposed. The rash had a characteristic appearance and course, as was apparent from a study of 26 cases which had occurred at the Hospital for Sick Children, Great Ormond-street. There seemed to be no reason to doubt the causal relation of the enema to the rash. In some children repetition of the enema had been followed repeatedly by the rash. Usually a bright red patchy erythema appeared, especially on the front of the knees, the backs of the elbows, the buttocks, and the face; in some cases, however, the rash was scarlatiniform, or the two forms might be combined. It appeared most often from 12 to 24 hours after the enema, and lasted usually from 24 to 48 hours; there was very rarely, if ever, any constitutional disturbance; the amount and time of retention of the enema and the duration of the preceding constipation did not seem to affect its occurrence. The rash occurred most often after a first enema. Children over six years of age seemed more liable to it than younger children, but it occurred in one case at two years and three months. Scarlet fever, rötheln, and measles were the exanthems for which an enema rash was most likely to be mistaken. The absence of constitutional symptoms, of sore throat, coryza, and pyrexia, and often slight differences in the character and distribution of the rash, together with the occurrence just after an enema, might serve to differentiate the enema rash. There was some evidence that desquamation might occasionally follow an enema rash, making the diagnosis from scarlet-fever still more difficult. It seemed highly probable that a certain number of the cases of so-called "surgical scarlet fever" were the result of enema given before operation. The erythema must be regarded as the result of a vaso-motor dilatation, but how this was produced was uncertain. Three possible explanations suggested themselves: (1) absorption of some toxic substance from the soap of the enema, possibly from the fats or the resins used; (2) absorption of some fæcal toxin, thrown into solution by the enema; and (3) a reflex effect on the vaso-motor centres. Arguments might be advanced in favour of each theory, but on the whole it was perhaps most reasonable to regard the rash as due to a vaso-moter change produced by absorption from the intestine of some constituent of the enema or of the fæces. Further observations were necessary before it could be decided from which of these sources the toxin was absorbed.

Mr. CHARTERS SYMONDS briefly described a case of a Foreign Body in the Vermiform Appendix. The patient, a young woman, was admitted for a tender swelling in the right inguinal region. This was diagnosed as a strangulated hernia containing omentum, although the medical man who had first seen the case had looked on it as an inflamed inguinal gland. On opening the sac of the hernia, which was an inguinal one, an inflamed appendix was found therein. This was found to contain a pin with a glass head. This and the appendix were removed and the patient subsequently did well. Mr Symonds brought the case forward since true foreign bodies in the appendix were rarely met with, most of the classical instances of cherry stones and date stones being merely instances of calcareous concretions.—The PRESIDENT said that the presence of the vermiform appendix in a hernial sac was not very uncommon and was more often met with in inguinal than in femoral hernia. The condition as described suggested a cystic collection in the canal of Nuck, but such cysts were not attended by the severe symptoms met with here. He had seen two genuine cases of foreign body in the appendix. In the first a pin was found and removed and the patient did well; in the second a needle caused the formation of an abscess in connexion with the appendix.

BRITISH GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—Some Points in the After-treatment of Cases of Abdominal Section.

A MEETING of this society was held on Oct. 13th, Mr. F. BOWREMAN JESSETT, Vice-President, being in the chair.

The following specimens were exhibited:—

Mr. CHRISTOPHER MARTIN (Birmingham): (1) Bifid Uterus with Retention of the Menses; and (2) Myoma of the Round Ligament.

Mr. R. H. HODGSON: Fibro-cystic Disease of the Uterus.

Dr. ARTHUR GILES: Large Cervical Myoma, weighing 7 lb., in the broad ligament.

Dr. J. MACPHERSON LAWRIE (Weymouth): (1) Uterine Fibroid complicated by Ovarian Cystoma; and (2) Fibroids removed by Myomectomy.

Dr. FREDERICK EDGE (Wolverhampton): Carcinoma Uteri removed by Vaginal Hysterectomy.

Mr. JESSETT: (1) Two specimens of Carcinoma Uteri, one complicated by fibroids, removed by vaginal hysterectomy; and (2) Cyst removed from the Transverse Meso-colon.

In the discussion on these specimens Dr. C. H. F. ROUTH, Dr. HEYWOOD SMITH, Dr. R. T. SMITH, Dr. GEORGE KEITH, and Mr. CHARLES RYALL took part.

Mr. CHRISTOPHER MARTIN read a paper on Some Moot Points in the After-treatment of Cases of Abdominal Section. He laid stress on the importance of preventing complications by care in the preparation of the patient, in the performance of the operation, and in the attainment of perfect asepsis. He said it was unnecessary to keep the patient rigidly on her back for 48 hours. The dressings should be simple, dry and absorbent, and aseptic. Wet dressings favoured suppuration and powders formed unpleasant crusts. For closing the abdominal wall he used interrupted sutures of silkworm gut passed through the whole abdominal wall. He disliked buried sutures. The sutures should not be removed till the tenth or twelfth day. He only drained in septic cases or

where there was much oozing. A little clean blood did no harm. He advocated iodoform gauze as a drain in preference to glass or rubber tubes. It was better to drain through the posterior fornix than through the abdominal wall. A hypodermic injection of morphia was advisable immediately after the operation as also in cases of great prostration and restlessness. He strongly recommended the purgative treatment of peritonitis, preferably calomel and salines, and discussed the mechanism of their beneficial action. He advised the early administration of bland fluids after the operation; it was cruel and harmful to withhold fluids for 48 hours. In vaginal sections he said the vagina should be packed with iodoform gauze and this should be left in till the seventh day. It was unwise to douche for at least a week after the gauze had been removed for fear of forcing the vaginal discharges into the peritoneum. Lastly, an abdominal belt should be worn for at least two years after every abdominal section. The discussion on this paper was adjourned to the next meeting.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Presidential Address.

A MEETING of this society was held on Oct. 14th, the President, Dr. E. GWYNN, being in the chair.

The PRESIDENT delivered an address on the Medical Officer of Health as a Public Teacher. Lord Beaconsfield, then Mr. Disraeli, in the electoral campaign of 1874, declared the public health to be the question of the day, and in the motto, *Sanitas sanitatum, omnia sanitas*, gave a watchword to his party which produced a succession of statutes beginning with his Public Health Act of 1875 and ending with that for London under Lord Salisbury's administration in 1891, each being a consolidation of, and improvement on, previous legislation. These acts, though fragmentary and imperfect, had been productive of much good. The two great religious legislators, Moses and Mahomed, inculcated personal cleanliness on their followers, but in the dark ages its neglect was regarded as a virtue and a distinctive mark of Christians. In our days, again, the sanitary reformer was the man of science as represented by the medical officer of health—a creation of the Act of 1855. An address by Sir B. W. Richardson in 1876 on "The City of Hygieiopolis" had aroused the public interest in sanitary problems, but the greatest impulse to practical results was given by Lord Salisbury's own article in the *National Review* in 1883 on the "Housing of the Working-classes." But the education of public opinion devolved on the medical officers of health, created by the Act of 1855, and whose appointment was made compulsory everywhere by that of 1875. Able, however, as a large proportion of these officers were, the multifarious nature of the routine duties imposed on them tended to give them the character of permanent officials and left them little leisure for other work. The necessity for the education of the public was evident from the fact that England, which had been the pioneer in practical sanitation, had not retained the lead but was being left behind in many respects by some other countries. He need but allude to the promotion of bacteriological and other scientific research, which, in the absence of the State aid so liberally granted on the continent, was here left to private generosity and effort; the "tremendous experiment," as Lord Lister had called it, of the abandonment of compulsory vaccination at a time when other nations were one by one following the example of Germany in requiring universal vaccination and revaccination; the ignorance of the principles of ventilation shown by the foul air of the law courts, theatres, schools, and churches; the general apathy as to the dangers of tuberculous milk and flesh,—in all of which we were behind other peoples. Other subjects on which the medical officer of health had great opportunities for teaching and leading public opinion were the housing of the working classes, not only in the slums and tenement dwellings of the older quarters of London, but in the thousands of jerry-built houses, springing up on all sides in the outskirts of the metropolis, destined to fall into dilapidation and become suburban slums in the course of a few years, these being the direct result of the vicious system of short ground leases and inefficient official control; while the consequences of these insanitary conditions were a high infant mortality, the miserable physique and demoralisation of the survivors, immorality, and crime. Then there was the pollution of the air by smoke tending to a high mortality from respiratory diseases. By how many sanitary authorities were the Smoke Acts strictly enforced? On all these questions and many others the medical officer's duty was to inform the community, but that he should be capable of fulfilling his true mission of their teacher, adviser, and leader it was necessary that he should enjoy more leisure and authority and that his salary and position should be such as to attract the best and ablest men in the profession. Meanwhile he urged his fellow officers to take a wide and lofty view of their vocation as embracing the welfare, physical and moral, of the entire community and to adopt as their motto, *Homo sum, humani nihil a me alienum puto.*

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

Presidential Address.—Annual Report.

THE annual meeting of this society was held on Oct. 12th in the Medical Library of University College, Bristol, Dr. Shaw, and afterwards Dr. Roxburgh, being in the chair.

Dr. R. ROXBURGH, in giving his Presidential Address, referred to a number of fascinating topics which at the present moment faced the pathologist, and some of which seemed on the verge of complete elucidation. The President then proceeded to deal with the Disillusions and Disabilities of Private Practice. He compared the ideals of the young and enthusiastic medical graduate with the difficulties which met him in maintaining these and in preserving a high scientific and ethical standard where his object was primarily to earn a livelihood. He pointed out that it was from the "commercial" side of practice that temptations arose to unprofessional acts and he appealed to the teachers of the Bristol Medical School to set a high ethical ideal before their students.

Mr. PAUL BUSH (honorary secretary) read his annual report, which showed a balance in hand of £47 on the ordinary account and of £103 on the Journal account. He referred to the loss the society had sustained by the death of Dr. H. Marshall and Mr. Augustin Prichard.

Dr. B. ROGERS (editorial secretary) read his report, which showed a deficit of £5 on the Journal for the year.

The honorary librarian (Mr. L. M. GRIFFITHS) read his report, which showed a balance in hand of £50; he mentioned that there were now 7180 books belonging to the society and that the Bristol Medical Library now contained nearly 19,000 volumes and was in receipt of 204 current periodicals. He made a long and clear statement as to the present condition of the library and intimated that after this year he would be unable to continue to be honorary librarian.

Dr. J. G. SWAYNE proposed and Mr. HANDCOCKE WATHEN seconded, and it was carried, "That Mr. L. M. Griffiths be thanked for his long services and that the report be adopted."

Dr. J. E. SHAW the retiring President, in supporting this motion, said it was the wish of all the members of the society that Mr. Griffiths should continue in office, a post he had so long held with such great benefit to the society and to the users of the medical library. He further mentioned that the excellent condition of the medical library was largely due to the energy and knowledge of Mr. Griffiths.

Mr. W. H. Harsant was elected President-elect; Mr. Paul Bush was re-elected honorary secretary; and Mr. L. M. Griffiths was re-elected honorary librarian. The following were elected to serve on the committee: Dr. Michell Clarke, Mr. J. Dacre, Dr. D. S. Davies, Dr. B. Rogers, Mr. Munro Smith, and Dr. H. Waldo. Mr. L. M. Griffiths, Dr. G. Parker, and Mr. J. Taylor were elected to serve on the Library Committee. Mr. W. Roger Williams was elected a member of the society.

PATHOLOGICAL SOCIETY OF MANCHESTER.

Election of Officers.—Exhibition of Specimens.

A MEETING of this society was held on Oct. 12th, Mr. C. E. RICHMOND, President, being in the chair.

The annual reports of the treasurer and committee were received and the following office-bearers elected for the

session 1898-99:—President: Dr. R. B. Wild. Vice-Presidents: Mr. J. Collier and Dr. E. S. Reynolds. Treasurer: Dr. T. A. Helme. Secretary: Dr. T. N. Kelynack. Committee: Dr. A. Brown, Dr. W. E. Fothergill, Mr. J. E. Platt, Dr. W. Milligan, Dr. F. C. Moore, Mr. W. A. Renshaw, Mr. J. W. Smith, and Mr. W. P. Stocks. Auditors: Mr. W. A. Hooton and Dr. E. J. Sidebotham.

The following card specimens were exhibited:—

Mr. STANMORE BISHOP: (1) Tuberculous Kidney; (2) Pyosalpinx, with Ovary converted into Thick-walled Abscess; (3) Pyosalpinx; (4) Chronic Metritis with Mucoid Polypus; (5) Ectopic Gestation removed before Rupture; (6) Encysted Hæmatocele of the Cord; (7) Tubo-ovarian Abscess; and (8) Fibro-cystic Uterus.

Dr. BLACKWELL: Cured Aneurysm of the Abdominal Aorta.

Dr. VIPOND BROWN: Calculus formed around a Hairpin.

Professor DELÉPINE: Apparatus for taking Photographs of Morbid Specimens under Water, with demonstration on the screen of results obtained.

Dr. DRESCHFELD: Syphilitic Liver.

Dr. KELYNACK: Medico-legal specimens—(1) Pharynx and Larynx blocked by Partially Masticated Meat; (2) Stomach from a case of acute Arsenical Poisoning; (3) Stomach from a case of acute Carbolic Acid Poisoning; and (4) Stomach from a case of Nitric Acid and Mercury Poisoning.

Dr MILLIGAN: Microscopic sections of—(1) Tuberculous Growth of the Septum Nasi; (2) Maxillary Antral Polypus; (3) Sarcoma of the Septum Nasi; (4) Sarcoma of the Soft Palate; and (5) Papilloma of the Uvula.

Dr. MOORE: Some Mammary Tumours.

Dr. STODDART: (1) Cast of a Stomach formed during life by ingestion of string, hair, &c.; (2) Chronic Ulcer of the Stomach simulating cancer during life; (3) Lymphadenomatous Spleen; and (4) Microscopical Sections of the Spinal Cord from a case of acute Suppurative Peritonitis.

Dr. WILD: Photographs and Microscopic Preparations from a case of Lichen Planus Verrucosus.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Exhibition of Cases and Specimens.

THE first meeting of the session was held in the Royal Infirmary, Newcastle-upon-Tyne, on Oct. 13th, Mr. H. HIND, President, being in the chair.

The following office-bearers were elected for the ensuing session:—President: Dr. Limont. Vice-Presidents: Mr. Hind, Mr. Rutherford Morison, Dr. G. R. Murray, and Dr. R. S. Peart. Honorary Secretaries: Dr. T. Beattie and Dr. A. M. Martin.

Mr. WILLIAMSON introduced a patient recovering from Orbital Thrombosis. Proptosis had remained limited to the right eye which was "spoilt." No septic focus had been discovered. He also recited a series of five cases of orbital thrombosis arising from trivial face injuries.

Dr. BEATTIE recounted a case of Cavernous Sinus Thrombosis proved by exclusion, post mortem, to have been due to facial erysipelas, and two others proved on necropsy to have resulted from middle-ear disease, the most frequent cause.—The PRESIDENT commented upon the rarity of this condition as a sequela to the very frequent septic affections of the nose.

Mr. MORISON brought forward a case of Orbital Sarcoma for comparison with Mr. Williamson's case.

Dr. G. R. MURRAY introduced: 1. A case of Thoracic Aneurysm showing Dilatation of the Superficial Arteries in the Chest-wall. A deep impulse was felt posteriorly to the left of the spine and a loud systolic bruit was heard over a wide area, being especially intense over the upper part of the spine. A marked peculiarity of the case was the almost complete absence of pulsation in the abdominal aorta and in the femoral arteries. 2. A case of Thoracic Aneurysm pointing in the Third and Fourth Intercostal Spaces immediately to the left of the Sternum. 3. A patient with Aneurysms of the Innominate Artery and of the Abdominal Aorta.—Dr. DRUMMOND referred to the difficulties of the first case and expressed his opinion that it was one of fusiform dilatation of the thoracic aorta with the formation of laminated clot which had been displaced and partially occluded the descending aorta. The second case, he thought, did not spring from the ascending arch but from the anterior surface of the descending aorta.

Dr. MURPHY showed: 1. A child, aged ten months, from whom he had successfully removed a large Cranial Meningocele. The child was now developing hydrocephalus. 2. A boy, aged six years, very anæmic, with a very large spleen and a liver slightly enlarged. He asked for a diagnosis and suggestions for treatment.—Dr. BEATTIE, after examining the blood, reported that there was no leucocytosis. The case was therefore not one of leukæmia; he would rather consider the splenic enlargement secondary to the anæmia.—Dr. DRUMMOND said the case answered the description of so-called "splenic anæmia." He thought it essentially one for medical treatment.—Dr. PLUMMER and Dr. OLIVER also took part in the discussion.

Professor OLIVER showed a patient recovering from Caisson Disease. The man had worked as a sinker at the construction of the piers of a bridge which was being built over the Tyne at a depth of 75 ft. below high-water level and at an atmospheric pressure of 35 lb. to the square inch. He had severe cramping muscular pains, with rigidity and paresis of the arms and legs, and a tendency to syncopal attacks. At the onset he had suffered from epistaxis and deafness.—The PRESIDENT asked whether hæmaturia or emphysema of the lungs had occurred in this case, and was answered in the negative.

The following specimens were exhibited:—

Dr. MURPHY: Appendix removed seven hours after the onset of the symptoms. The patient had made an uninterrupted recovery.

Mr. WILLIAMSON: Liver and Duodenum, showing a large communication between the fundus of the gall-bladder and the duodenum with a large facetted gall-stone *in situ*. Another large facetted stone had been removed from the small intestine by operation, where as an enterolith it had caused acute intestinal obstruction.

Dr. DRUMMOND: Congenital Cystic Kidneys removed from a woman, aged forty-five years, being the third member of the same family who had died in adult life from this disease, diagnosis confirmed by necropsy. He stated that he had at present under observation two members of another family suffering from the same disease.—Mr. ANGUS, Dr. BEATTIE, Mr. MORISON, and Dr. DRUMMOND discussed the developmental origin and subsequent pathology of the condition.

FORFARSHIRE MEDICAL ASSOCIATION.—A meeting of this society was held in the University College, Dundee, on Oct. 7th, Dr. J. Mackie Whyte, Vice-President, being in the chair.—Dr. McGillivray showed a case of Paralysis of the Right Cervical Sympathetic with well-marked symptoms of Unilateral Anhidrosis, Myosis, Ptosis, Enophthalmos, and Heterochromia. No direct cause could be ascertained except the vague history of an injury to the cervical vertebræ, which probably also accounted for the pain on deep pressure over the spinous processes of the third and fourth cervical vertebræ. Dr. McGillivray also discussed certain points in connexion with the treatment of corneal ulceration, such as the relief of photophobia and blepharospasm for the purpose of restoring the normal processes of nictitation and lacrymation and also the normal corneal temperature, &c.—Dr. Stalker read notes of three cases of Needle Swallowing and discussed the treatment.—Mr. Greig read a paper on the Infectivity of Venereal Warts in which he set forth that a fourth venereal disease should be recognised. Out of 330 venereal cases of his own taken at random 14 had venereal papillomata, 9 of which had absolutely no evidence or history of any other venereal trouble or any signs of balanitis, &c. Mr. Greig gave an example of a husband having infected the wife with venereal warts and also an example where the husband infected the wife and the wife infected her child. He did not think that it would be put down to the discharge when both are present, as one often finds the discharge present without any warts. The incubation period he thought was about four weeks.—Dr. Mackie Whyte spoke of cases he had seen in the parochial hospital and treated successfully with salicylic acid and collodion.—Dr. Mackie Whyte read notes of a case of Tricuspid Stenosis in a woman, aged thirty-seven years, whose trouble had commenced with an attack of endocarditis at the age of ten years. Mitral and aortic stenosis developed and this was evidently followed by tricuspid, as was shown by the condition of the valves at the post-mortem examination. The right auricle

of the heart (which was shown at the meeting) was greatly enlarged and hypertrophied, the right ventricle had thinner walls than normal, the left auricle was somewhat hypertrophied, and the left ventricle showed thickening of the wall (⅛ in.), but no dilatation. Dr. Whyte also spoke of a case he had attended several years ago of pure tricuspid stenosis.

BIRKENHEAD MEDICAL SOCIETY.—The inaugural meeting of this society for the session 1898–99 was held on Oct. 14th and was well attended. Dr. Francis Johnston having resigned the office of President Dr. H. Nazeby Harrington was unanimously elected to the position and Dr. Joseph Blood to that of Vice-President. The President (Dr. Harrington) gave an inaugural address on the Association of Medicine with Literature in England, pointing out some of the facts connected with the lives of members of the medical profession who had become prominent in the world of letters from the time of Thomas Linacre down to that of Conan Doyle, special attention being drawn to the medical part of their lives and the influence that their medical training had upon their literary work. Whilst most of the medical *littérateurs* were touched upon the following were spoken of at greater length: Linacre, Sir Thomas Browne, Sir Samuel Garth, Sir Richard Blackmore, Smollett, Akenside, Goldsmith, Crabbe, and Keats.—A hearty vote of thanks, proposed by Dr. Sydney Marsden, seconded by Dr. Harris, and supported by Mr. Vacher, Mr. Shears, Dr. Temple, and Mr. Laird Pearson, was given to the President for his able address.—The President replied.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The first meeting of the forty-third session was held on Oct. 14th at the Royal Kent Dispensary, Greenwich-road, S.E. Dr. E. H. Ezard, Vice-President, occupied the chair.—The treasurer's balance-sheet and the annual report were adopted and several new members were elected.—Mr. Ernest Clarke read notes of cases of Foreign Bodies in the Orbit in which no external wound was visible.—Dr. Toogood, Mr. Hartt, and Mr. Joscelyne discussed the paper.—Dr. George Herschell then gave a demonstration on Intra-gastric Instruments, including Turck's Gyromele and the Intra-gastric Needle Douche.—Dr. Morgan Dockrell showed cases of Urticaria Pigmentosa and Syphilis.—Dr. Toogood showed a case of Tuberculous Arthritis in a child which was gradually improving.—The following officers were elected:—President: Dr. Morgan Dockrell. Vice-Presidents: Dr. Edward H. Ezard and Mr. Charles J. Parke. Council: Dr. George Herschell, Mr. Arthur E. Joscelyne, Dr. John Mackern, B.A., Dr. Thomas C. Meggison, Dr. Robert E. Scholefield, Dr. Patrick C. Scott, and Dr. Septimus Sunderland. Treasurer: Mr. John P. Purvis. Secretary: Dr. John P. Henry. Librarian: Dr. H. Bowen Williams.

NEWPORT MEDICAL SOCIETY.—The annual meeting of this society was held on Oct. 5th, the retiring President, Mr. O. E. B. Marsh, occupying the chair. The honorary secretary read his report on the work of the society during the past year and this was discussed and approved. The election of officers for the ensuing session was then proceeded with. Mr. H. E. Williams was elected President, Mr. C. Brooke Gratte was elected Vice-President, and Mr. W. Basset was re-elected honorary secretary. Mr. H. B. Seddon and Mr. B. W. Gowring were elected to the two vacancies on the committee. The retiring President then vacated the chair in favour of the President, who returned thanks to the members for his election, and in the course of a few remarks commented upon the satisfactory position of the society and of the usefulness of the same.—A case of Molluscum Contagiosum was shown by Dr. T. Morrell Thomas and Mr. Marsh showed a specimen of small Ovarian Cyst removed by him, with notes of operation, &c.

WEST PENRITH MEDICAL SOCIETY.—A medical society has been formed comprising those medical men practising in the Land's End district under the title of the West Penrith Medical Society. The first meeting was held at the West Cornwall Infirmary on Oct. 12th, when Dr. J. B. Montgomery was elected President and Mr. W. S. Bennett Vice-President. Mr. J. Symons and Mr. H. M. Montgomerie were elected on the committee and Mr. A. R. F. Evershed was elected Secretary. After the election Dr. Hugh M. Montgomerie read a short paper on Infective Endocarditis, illustrating his remarks with the heart from a case which had recently been in the infirmary.

Reviews and Notices of Books.

Manual of Ophthalmic Surgery and Medicine. By WALTER H. H. JESSOP, M.A., M.B. Cantab., F.R.C.S. Eng., Ophthalmic Surgeon to, and Lecturer on Ophthalmic Medicine and Surgery at, St. Bartholomew's Hospital, &c. London: J. and A. Churchill. Crown 8vo. Pp. 469. Price 9*s.* 6*d.*

MR. JESSOP has in the work before us written a manual which will prove very serviceable to the student. He has taken for granted that those who will use it are fairly familiar with the anatomy and physiology of the eye and that it is unnecessary to do more than recall to their memory those facts which have a direct bearing on the pathology of the several tunics and humours. Thus under the head of Diseases of the Choroid there is a short introductory paragraph, not exceeding half a page, which describes its position, the layers of which it is composed, with the nervous and vascular supply, but, of course, with no details of the several constituents. So with the Diseases of the Retina, the structure of the retina is relegated to a short note; but the points which it is useful for a student to know, as the yellow spot and the disposition of the vessels, together with the origin, course, and arrangement of the fibres in the optic nerve, are given more fully. The style is throughout plain and intelligible and where a description of an operation is given, such as that of extraction of the lens in cataract or that of ectropion or tenotomy, Mr. Jessop expresses himself both with brevity and clearness. In the treatment of cataract he states that when the patient is not suffering from cough or any disease which necessitates straining he operates without an iridectomy, but in cases of incomplete or over-mature cataract he prefers an iridectomy owing to the difficulty of removing the soft lens substance without bruising the iris. He appears to prefer the 3-millimetre corneal flap operation. In speaking of herpes ophthalmicus Mr. Jessop states that he has found the best means to relieve the neuralgia and formication which persist after the vesicles have disappeared to be a mixture of chloroform and eau-de-Cologne. He, however, does not mention a method of treatment which has been found to be very effective—the passage of a constant current of electricity.

In the treatment of sarcoma and malignant growths their removal with, if necessary, that of the eye and the contents of the orbit is recommended, and after the hæmorrhage has been stopped by pressure it is suggested that chloride of zinc on strips of lint may be plastered round the sides of the orbit and the rest of the cavity filled up with cotton-wool. It is indeed added that "the effect of this treatment is that the periosteum and frequently a layer of bone exfoliate," and that "this operation is always followed by severe reaction." But the proceeding is a dangerous one and we have known a fatal result to follow from the chloride of zinc penetrating the cranial cavity and eating away the walls of the cavernous sinus.

Mr. Jessop is of opinion that sympathetic ophthalmitis is probably of microbic origin, though he admits that the exact method of transmission from the exciting to the sympathising eye is still uncertain. When sympathetic ophthalmitis has definitely commenced, although its course can be but little altered by excision of the exciting eye, yet if this eye be blind or only have perception of light it should, he thinks, be straightway removed, and in such cases he would never do a partial operation as abscission or evisceration, and we consider this to be sound practice.

Although we agree generally with the opinions held by Mr. Jessop, we think that he does not counsel wisely when in speaking of tenotomy he observes that the operator may increase the effect of the operation by dividing freely the

capsule of Tenon near the tendon or by rotating the eyeball forcibly by the forceps in the opposite direction to allow the tendon to slip backwards. The last proceeding is very uncertain in its effects and the free division of the capsule of Tenon we take to be the cause of many bad results. If division of the tendon at its insertion be insufficient to rectify the defect, it is better to proceed at once, as indeed he himself recommends on another page, to advance the opposite tendon. Extensive opening of the capsule of Tenon should never be practised.

The subjects of Refraction and Accommodation are briefly dealt with, but the practitioner will find in the chapter devoted to them all that is necessary to enable him to select the requisite glasses either by direct examination by means of the ophthalmoscope or by retinoscopy.

The chromo-lithographs are eight in number arranged on four plates, and give representations of the normal disc and of the following diseased conditions: albuminuric retinitis, disseminated choroiditis, retinitis pigmentosa, and papillitis; post papillitic atrophy; glaucoma and myopic crescent. Though not equal to the best foreign lithographs in colour they show very well the conditions which they are intended to represent. There is also a reproduction of Professor Holmgren's colour-vision plate giving the confusion tints. The woodcuts, which number 104, are well executed. There are remarkably few typographical errors. Altogether the work will hold its own against the several treatises of about the same size which have appeared in English and foreign tongues and we have great pleasure in recommending it to all who are about to spend three or six months in the ophthalmic wards of a hospital. With this book in their hands and daily observation of ophthalmic cases they will learn much that they will find useful in practice.

Elements of Histology. By E. KLEIN, M.D., F.R.S., and J. S. EDKINS, M.A., M.D. Revised and enlarged edition. London, Paris, New York, and Melbourne: Cassell and Co. 1898. Pp. 488. 296 Illustrations. Price 7*s.* 6*d.*

THIS valuable work is so well known to students that a new edition embodying recent discoveries is sure of a welcome. The book shows signs of careful revision throughout and many of the chapters have been completely rewritten. There is a practically new introductory chapter on the Structure and Life of the Individual Cell, and a full account is given of the minute structure of the nervous system as revealed by the staining processes elaborated by Weigert, Golgi, and Ramon y Cajal. The structure of the nerve cell revealed by Nissl's staining method is, however, not referred to. This section is admirably illustrated. Many other parts have been expanded to introduce the latest teaching. Dr. Klein and Dr. Edkins have wisely introduced photography largely for purposes of illustration, and the results, if less distinct than the older semi-diagrammatic drawings, are much truer to nature and correspond more closely with the preparations which the student will have to examine for himself. The section on the Blood hardly takes full account of the recent work of Ehrlich and others, but what is given is clearly written and well illustrated. Students could not have a better guide in their histological work and we have no hesitation in strongly recommending this edition.

Clinical Observations on 2000 Obstetric Cases. By G. PORTER MATHEW, M.D. Cantab. London: Simpkin, Marshall, and Co. 1898. Pp. 71. Price 2*s.*

CAREFULLY recorded clinical observations upon cases of labour are of the greatest possible value in enabling us to come to a conclusion as to the merits of the various methods of treatment advocated in abnormal cases of delivery. Dr. Mathew has analysed the cases under his care at Queen Charlotte's Hospital, at St. Mary's Hospital, and in private practice with great industry and care, and the results are of much interest. He has been perhaps a little too ready to lay down rules of treatment from what is after all a relatively small experience, although a very valuable one owing to the careful manner in which the results have been recorded.

In cases of unreduced occipito-posterior presentations he advocates early rotation of the occiput forwards per vaginam. We are inclined to think that many of these cases can be equally well treated by rotation of the child's body through the abdomen without the introduction of the hand into the vagina, and this is certainly, when possible, the safest and best method of treatment.

Dr. Mathew's remarks upon the varieties of a prolonged first stage are of value, and we can fully confirm from our own experience his recommendation of chloroform in those cases where the action of the uterus is almost continuous without any appreciable dilatation of the cervix and where the subjective distress is very great. The method of saving the perineum by the use of axis traction forceps, of which Dr. Milne Murray is so warm an advocate, is an exceedingly good one, although there are undoubtedly cases in which it is quite impossible by any means whatever to prevent a rupture. No doubt Dr. Mathew will sooner or later meet with such a case, although his results of 21 consecutive primiparæ delivered by axis traction forceps under chloroform without a single laceration of the perineum are exceptionally good. The author is in error in thinking that as regards sapræmia and the evolution of septicæmia the theory of symbiosis has not been put forward. It is, and has been for some time, a matter of current teaching, at any rate at one of the metropolitan medical schools, and we have no doubt that it is taught at others. Obstetricians owe Dr. Mathew a debt of gratitude for the amount of work which he has done in analysing his cases, and he is to be congratulated upon the good results of his practice.

LIBRARY TABLE.

The Illustrated Annual of Microscopy. London: Percy Lund, Humphries, and Co. 1898. Pp. 164. Price 2*s.* 6*d.* net.—The once familiar "Text-book" or "Complete Treatise on the Microscope," which included, beside an account of the instrument in its various forms, its history, accessories and method of use, a more or less complete description of, at least, samples taken from each of the three natural kingdoms, appears to be a thing of the past. This is, perhaps, hardly a matter for surprise, considering, first, the complete revolution which has taken place in the theory of microscopic vision during the past twenty years or so and, secondly, the intimate relation which the microscope now holds with nearly every department of physical science. These two factors have rendered it almost an impossibility to combine such an account of modern physical optics, including a discussion of the Abbe theory, as would suffice for more than an elementary student of physics, with anything but a most perfunctory description of the later methods of research and their application to biological science, as now understood, within the limits of a handbook. This may be seen from the last attempt of the kind—i.e., Dr. Dallinger's edition of "Carpenter on the Microscope," a work extending to close on 1100 octavo pages published in 1891. Here the first or optical portion has been entirely rewritten by the learned editor and associates and, as might have been expected, is thoroughly sound in theory and practice. The second or biological part, however, except such portions as bear on the editor's own researches and some few others where he called in the aid of specialists, remains very much as in the later editions issued in Dr. Carpenter's lifetime, when he had ceased to keep abreast with, or was too old to assimilate, more modern views. Hence this

latter is, for the most part, practically useless at the present time. Even if it be granted that such a work *might* be compiled by fortunate collaboration it would necessarily be cumbrous and, from the rapid advance of science, soon obsolete. Progress, then, can hardly be followed by the mere study of a text-book issued at rare intervals, and it is to the periodical that recourse must be had for the latest information. The "Illustrated Annual of Microscopy" is the newest attempt to supply the class it appeals to with up-to-date notions on the subjects it treats of. On the whole, and so far as it goes, we think it has succeeded; but the question may well arise whether such a limited survey of things microscopic as is presented in this first issue and its publication at yearly intervals will satisfy its readers. This, however, is a matter for its editor and publishers to settle and we are chiefly concerned with the contents of the Annual and the way in which they have been treated by the respective authors. The opening paper is on the Diphtheria Group of Bacilli, by Dr. J. Eyre, and the methods of demonstrating, cultivation, staining, &c., including the morphology of the various varieties, are well and clearly given. The process-block illustrations, however, leave something to be desired, as is usually the case, and they would, in our opinion, have shown to greater advantage on a black ground. Two articles on Photo-micrography are contributed, one by Mr. J. W. Gifford, who has rendered great services in this branch by his improvements in screens and light-filters, and another by a pseudonymous author who strongly advocates the use of magnesium ribbon as an illuminant. Mr. Gifford's paper, although short, is well worth the study of the beginner in this art. Dr. Henri Van Heurck, Director of the Antwerp Botanical Gardens, one of the best-known Continental microscopists, gives a review of the microscope in 1897 and such new apparatus as has been recently devised. Unfortunately, or the reverse, he finds "there is not one important invention to chronicle during this period, beyond the introduction of a few new models and the improvement of details in apparatus already existing." We have been for some time of the opinion that the present microscope with its objectives is already far beyond the capacity of the majority of its users. It is somewhat amusing to read Dr. Van Heurck's commendation of the objectives of a certain firm as excellent and sold at a reasonable price, one of which, a 1·5 mm. of 1·4 N.A., he says, *only* costs about £20. Mr. Rheinberg's article on Multiple Colour Illumination is probably one which will excite great interest in those who may not have seen his original papers in the Journal of the Royal Microscopical Society for 1896 or the Journal of the Quekett Microscopical Club for 1897. The method itself is not new, but Mr. Rheinberg was the first to reduce it to scientific exactitude, and its possible applications to certain problems of movement in living, transparent organisms make it of value beyond the merely charming manner in which it displays many familiar microscopic objects. The longest contribution to the Annual and one of paramount importance to the "brass and glass" microscopist is Mr. Conrad Beck's exposition of the theory of Gauss as applied to microscopic problems, entitled "The Elementary Theory of the Microscope." Gauss's formula has been explained and a worked example given in the Dallinger-Carpenter, but we do not think this system has ever been put forward with so great detail and with so much explanatory reasoning in any previous English work, and although we are far from saying that the path of the rays through the central portion of a system of lenses is, on this formula, made plain to the "meanest intelligence," it will undoubtedly be of great service to the amateur student of microscopic optics. Some knowledge of mathematics is, of course, necessary to the understanding of papers of this kind; neither does the Gaussian theory explain the whole of the problems involved in the optics of wide-angled objectives, but nevertheless it is a work to be welcomed and Mr. Beck deserves great credit for presenting it in the lucid manner in which he has done. Mr. M. I. Cross descants on "uniformity and accuracy," and deals, *inter alia*, with the urgent desirability of fixing upon some universal size or sizes for eye-pieces. We have some approximation to a universal gauge for objective threads, recently improved by the Royal Microscopical Society, but wide differences exist in the diameters of eye-pieces as supplied by the various opticians, English and Continental. He also treats of the dishonesty of some makers who, in many instances, wrongly state the focal length and aperture of their objectives. There are several other papers of interest to the amateur microscopist, but we are struck with astonishment at the admission of one query in the body of the book—viz., "Living acari artificially produced. Is it a fact?" This rubbish, of course, refers to the *experiments* of the at one time notorious "philosopher" Crosse which are mentioned in "Vestiges of Creation." Such exploded nonsense is only fit for papers of the "Bits" order and we are left wondering how it obtained admission into a modern scientific work. Finally, and with this exception, we think the "Annual" a useful addition to the periodical literature of its class. It will no doubt be extended and made to embrace a somewhat wider range of subjects in future issues, but in its paper, typography, illustrations, and general freedom from error it is a distinct credit to its enterprising publishers.

Antiseptic Principles for Nurses. By C. E. RICHMOND, F.R.C.S. Eng., honorary surgeon, Ancoats Hospital, Manchester, &c. London: J. & A. Churchill. 1897. Pp. 47. Price 1*s.*—In this little book we find a short account of the reasons for precautions against sepsis expressed in language simple enough to engage the attention of the average nurse. Anything which will impress upon nurses the immense importance of every step taken in insuring asepsis is to be warmly welcomed, for a nurse is very apt to regard many of the procedures as unnecessary and, when opportunity offers, to relax her vigilance. In the last chapter the author has laid down the general rules which govern the surgeon in the dressing of wounds, but he has not gone further into the subject, considering that the nurse has every opportunity of acquiring a full knowledge of the practical application of these principles in the course of her duties in the wards.

Diseases of the Upper Respiratory Tract, the Nose, Pharynx, and Larynx. By P. WATSON WILLIAMS, M.D. Lond., physician to out-patients and in charge of the Throat Department at the Bristol Royal Infirmary, &c. Third edition. 1898. Bristol: John Wright and Co. 8vo. Pp. 282. Price 8*s.* 6*d.*—When noticing in 1894 the first edition of this work we were able to praise the clearness of the account which it gives of the diseases of a very important part of the body. We do not know of any volume of its size which we would rather recommend to those students and practitioners who wish to have a fuller account of the medicine and surgery of the nose and throat than is to be found in the ordinary text-books. The illustrations are numerous and good; there are five coloured plates showing the normal and abnormal appearances of the larynx, pharynx, and nose. A useful table is given on page 70; it summarises the main points of distinction between some of the most common diseases of the tonsil. Though the differences between the present edition and the first are not very great, yet the whole book has been revised and brought up to date.

BRISTOL CHILDREN'S HOSPITAL.—A well-equipped laundry has been recently added to the Bristol Children's Hospital. The cost, for which the ordinary income of the institution will not be used, is about £1200.

New Inventions.

CUTTING FORCEPS FOR USE IN THE TREATMENT OF LARYNGEAL PHTHISIS.

THE forceps depicted in Fig. 1 were shown at the Laryngological Society of London during 1898. Fig. 3 is a sketch of the cutting end, the circle being the exact size of a piece of paper cut out by the instrument. Figs. 2 and 4 represent an

FIG. 1

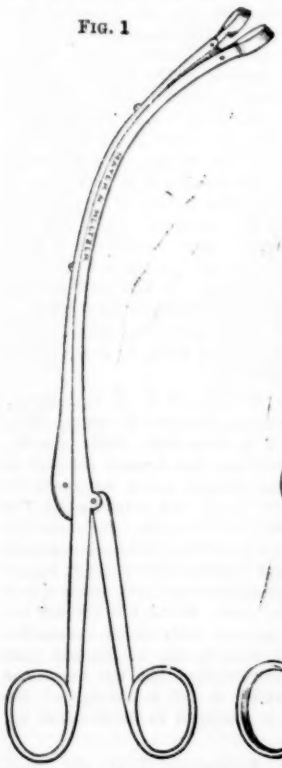

FIG. 2.

instrument which is made for removing superabundant tissue from the inter-arytenoid region, with a drawing of the and and of the sized piece capable of removal; both the letter full size. These forceps are of strong build and will cut through dense tissue or cartilage with the greatest ease.

FIG. 3.

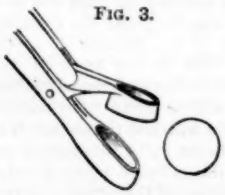

FIG. 4.

This is a point of considerable practical importance in laryngeal surgery and one often has to regret the weakness of tube forceps in punching out pieces of the glottic rima. The anterior-posterior cutting forceps will be found useful in removing tissue from practically every part of the rima, including the epiglottis, and no tissue will be found too dense. The downward cutting ones are for removal of those warty intra-arytenoid masses so hard to remove with any other instrument. They cut a little obliquely to suit the normal slope of the inter-arytenoid fold. These instruments are made by Messrs. Mayer and Meltzer, of 71, Great Portland-street.

Harley-street, W. RICHARD LAKE, F.R.C.S. Eng.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held on Oct. 13th, the President, Sir WILLIAM MAC CORMAC, Bart., K.C.V.O., being in the chair.

It was decided to place the bust of Sir Richard Owen, by Mr. Alfred Gilbert, R.A., in the entrance hall of the Museum.

The Council adopted the following recommendations of the Committee of Management:—

1. That Hymers College, Hull, be added to the list of institutions recognised for instruction in chemistry, physics, practical chemistry, and biology; and that Reading School be added to the list for instruction in chemistry, physics, and practical chemistry.

2. That the University of Yale and the University of Malta be added to the list of institutions recognised by the Board at which the whole curriculum of professional study may be completed and whose graduates in medicine are admissible to the Final Examination.

The Committee of Management further reported that they had granted permission for the meeting of the International Otological Congress to be held at the Examination Hall in August, 1899.

Sir William Mac Cormac, who had retired by rotation from the Committee of Management, was re-elected.

The Laboratories Committee presented the following report, which was adopted:—

1. *The work on diphtheria for the Metropolitan Asylums Board. Preparation of antitoxin.*—Since June 3rd 7050 doses of antitoxin, each containing 2000 units, and 2325 doses each containing 4000 units, for the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board, have been supplied and all the demands fully met. During this period 23,400,000 units have been supplied. Taking the quarter from June 3rd to Sept. 1st the figures are: 6300 doses of 2000 units and 600 of 4000 units, or 15,000,000 units in all, against 12,000,000 for the previous quarter. During this period the average strength of the antitoxin has been still further raised, so that it has been possible to send out 2000 units in quantities of from 4·25 to 5 c.c.

2. *Researches in connexion with the grant from the Goldsmiths' Company.*—Dr. T. G. Brodie and Dr. Cartwright Wood have continued their investigations and have planned out further series of experiments for the coming winter. The committee have unanimously awarded to each of them a further sum of £50 from the Research Grant as a recognition of their valuable work. The demand for antitoxin supplies to general and children's hospitals in London, in accordance with the conditions of the grant from the Goldsmiths' Company, for use among the poorer classes of the community is steadily increasing; 730 doses, containing in all 1,500,000 units, have been applied for and sent out during the past four months.

3. The Committee also report to the two Colleges that the director has forwarded to the Royal College of Physicians an account of an investigation carried on on the arrow poison received by the College from the Foreign Office.

Mr. H. G. Howse was re-elected a member of the Laboratories' Committee.

The Council appointed Mr. William Hardy Fleetwood, late of Epsom College, and now a student of the London Hospital, as the sixth Jenks scholar.

Mr. MORRIS, as chairman of the Annual Report Committee, submitted for the consideration of the Council a draft copy of the report to be presented to the Fellows and Members at the annual meeting to be held on Nov. 17th, 1898. It was approved.

The attention of the Council having been called by a local branch of the Incorporated Medical Practitioners' Association to the connexion of a Member of the College with a friendly society, it was determined that the branch of the association should be informed that the Council expressed their disapproval of canvassing for patients and of the employment of professional advertisements addressed directly to the lay public, and that this opinion would be communicated to the Member in question. It was also determined that the branch of the association should be informed that, as it did not appear to the Council that the society in question differed in any essential particulars from other registered friendly societies, the Council could not take any action in the case.

The SECRETARY reported that he had received the copy by Mr. John L. Reilly of the portrait by Mr. Stephen Pearce of Sir Erasmus Wilson, which was offered to the Council at the beginning of this year, and that the donor was Mr. Arthur H. Heywood, of Elleray, Windermere.

The Council voted their best thanks to Mr. Heywood for his present.

The PRESIDENT stated that the Bradshaw Lecture would be delivered by Mr. T. Pickering Pick on Wednesday, Dec. 7th, at 5 o'clock P.M., and that the subject of the lecture would be "The Union of Wounds."

A letter was read from Mr. T. M. Hocken, M.R.C.S. Eng., of Dunedin, New Zealand, asking the Council to consider the advisability of instituting a gown for the Members of the College. The subject was referred to a committee.

THE LANCET.

LONDON: SATURDAY, OCTOBER 22, 1898.

IT is simply a platitude to say that the continuance of plague in India is a most serious matter and one which places the Government of that country in an extremely difficult position between the opposing forces of sanitation and political expediency. While attempts are being made to limit its spread by restrictive measures disaffection has been growing apace among the natives owing to their strong opposition to the measures which have been hitherto taken to suppress the disease. It is, of course, impossible to stamp out a disease like plague without much irritating interference with the liberty of the subject, by entering their houses and by obtruding into their domestic life in many ways very objectionable to Easterns. And so it has come about that, whether Hindu or Mahomedan, the natives are far less terrified at the risk of contracting plague than at the measures taken to suppress it. Moreover, if the attempt at stamping out an infectious disease is to be efficacious as a precautionary proceeding, its limits of application in point of numbers, time, and space must be regarded. Preventive measures must be rigidly enforced from the very beginning of an outbreak and whilst it is still circumscribed within narrow bounds and while the numbers attacked are still relatively small. Failure within a given time to suppress what threatens to become an invading epidemic by any stamping-out process may be taken as indicating that further efforts in this direction will prove futile. We must in that case fall back for hope of success on the general sanitary conditions being such that the disease cannot obtain any secure foothold for its continued existence.

To quote the words of the Indian Government, "To attempt by force to eradicate a disease when the entire population exerts itself to oppose the methods adopted is an effort foredoomed to failure." It must be borne in mind, too, that, as far as Western nations are concerned, the knowledge of plague until quite recently was extremely small and of a literary and academic, rather than of any practical or scientific, kind. The measures which have been taken in India have, we regret to say, been only partially successful, with the exception perhaps of M. HAFFKINE'S system of inoculation, about which, however, we do not yet know enough to decide positively whether it is efficacious and, if so, how long the immunity conferred by it lasts, or whether it is a practicable scheme to apply in India with its teeming population. The present epidemic of plague made its first appearance at Bombay in the autumn of 1896 and it is still there. It has shown itself in greatest intensity and persistency in Western India, but it has nevertheless become widely spread over India generally. It is difficult to say which is the worst feature connected with it—whether the sickness and grave mortality it has caused, or the financial loss, commercial distress, and popular opposition and disaffection that it has entailed. The deaths from plague have not, after all, been so numerous as in a severe and widespread epidemic of cholera or as in the chronic drain on life attributable to the malarial fevers of India and their consequences. The Government of India, to do it justice, usually has the courage of its opinions in such matters, but it cannot go on indefinitely spending money and incurring the almost certain risk of a widely spreading disaffection among its subject races without having strong grounds for its action. We think, therefore, now that bubonic plague may be almost regarded as endemic in Bombay and Western India, that the Government is right to amend and relax the stringency of the measures it has adopted hitherto. During the three years in which plague has existed in India we have had time to discount the danger of its importation into Europe, and, as Major J. CRIMMIN, V.C., of the Indian Medical Service, has very pertinently pointed out, there are places in the Persian Gulf and Red Sea nearer Europe where plague has been endemic for some years past.

Recent bacteriological researches have revealed to us the intimate relations of plague to a bacillus, which, whilst vegetating and proliferating in the lymphatic glands, probably elaborates the virulent poison or toxin which acts so fatally on the tissues of the circulatory and nervous systems. Sometimes the plague bacillus or its virus passes into the general system without the intervention of such glandular manifestations, but the striking and common feature of plague is that it is bubonic. Now, accepting the pathological correctness of this view, there still remains a great deal to be cleared up about the history of this micro-organism and its vehicles, how it gains an entrance into the human body, the way to prevent its doing so, how it manifests its presence, and how to render the system immune to its morbid action. The relations of this bacillus to the lower forms of animal life, too, have to be more exactly determined, as well as its relation to insanitary conditions generally and to those of defective domestic hygiene. We are very glad, therefore, to see that the Government is appointing a Special Commission for the purpose of making scientific inquiry into plague and of investigating the origin of the various outbreaks, the manner in which the disease is spread, and the effects of curative serum and preventive inoculation.

IT will be universally admitted that in free countries legislation should be as much as possible in accordance with the general sense and intelligence of the people. Many a great law-giver from the time of MOSES has had to wait before he promulgated what he knew to be the right law because the people for whom he was legislating were not ready to receive it. The same difficulty occurs to all legislators, especially in free and democratic countries. The working of this principle affects for the worse every question which has to be dealt with by statesmen, but the results are most serious or even pernicious when they arise with regard to questions more or less technical and special. Faddism is well recognised by men of all parties and by universal consent certain questions

are to be raised above all petty and party considerations. There are many men in every party who feel that to deal with these questions from a party point of view is to degrade and dishonour Parliament itself. Among such subjects the health of the people is pre-eminently the first. There are wire-pullers and opportunists in all parties who would be prepared to make party capital even out of such a subject. But we are loth to believe that there is not a sufficient number of sensible and humane men in every party who would if rightly guided secure the settlement of such questions on non-party lines and in a way consistent with the judgment of those who, after all, are responsible for the health of the people, whether in the way of safeguarding it or of restoring it when it has been lost. It is obvious that a system of State Medicine can only be formulated by those who are familiar with disease, and that only those who have studied the causes of disease can be competent to advise as to the means by which such causes can be counteracted. There are diseases which prevail on so large a scale and so grievously affect the happiness of the people as to be suitable subjects for State action. Such are the great groups of infectious disease, including tuberculosis.

Two recent events show how erroneously some sections of society conceive of the duties of the State in respect of public health. When diphtheria-antitoxin was first introduced in the Metropolitan Asylums Board hospitals a group of gentlemen waited, if we remember rightly, on the President of the Local Government Board to protest against such a therapeutic measure being used in rate-supported establishments. They did not propose themselves to treat the children dying from diphtheria in these institutions, but they deliberately desired to tie the hands of the medical officers who had studied the subject and were responsible for the life of these children by withholding the one remedy which has been found more efficacious than all others. The very audacity of the proposal defeated itself. Diphtheria is now to some extent a controllable disease so long as it is treated according to the teachings of medical science, and many of the sanitary authorities are displaying a commendable readiness to adopt the latest suggestions of science for the detection and treatment of it. Is it not remarkable that a body of totally uninformed persons should take upon themselves to interrupt such work? The second event to which we have referred is the alteration of the Vaccination Acts in the direction of weakening the compulsory principle. This magnifies the liberty of the individual to incur the risk of contracting a disease which he may convey to twenty other persons before he is aware of having it—a precious result of liberty—but does not necessarily lead to an increase in the number of persons refusing to be vaccinated. All medical opinion is solid in regarding vaccination and revaccination properly performed as a preventive of small-pox, but the position of the recalcitrants was such that strict compulsion was outside the realms of practical politics. This fact does not lessen the grave responsibility which ignorant persons have taken upon themselves in discrediting vaccination. Their action has led to the loss of many infant lives, a fact which cannot be gainsaid after a cursory examination of the incontrovertible figures.

Such instances of a want of harmony between scientific knowledge and popular judgment make it necessary to revert to the first principles of State Medicine and to ask what are the circumstances which justify the disregard of individual liberty or rather its subordination to the welfare of the public. The very conception of State Medicine implies that the State is to use all scientific hygienic safeguards and, if necessary, enforce them by compulsion. It is also implied that in so acting the State shall be guided by medical science, and by the best medical opinion it can command. "No one," says Mr. FROUDE, "talks of a right of private judgment in anything but religion; no one but a fool insists on his 'right to his own opinion' with his lawyer or his doctor. Able men who have given their time to special subjects are authorities upon these subjects to be listened to with deference, and the ultimate authority at any given time is the collective sense of the wisest men living in the department to which they belong." These sentences contain the fundamental principle of State Medicine. The State must take its medicine from the best medical opinion. If it act otherwise it will suffer, and in the long run will suffer on a huge scale. It follows that in matters concerning the health of the community the State should have no political divisions. It should act as a whole on the scientific opinion given to it.

IN London we are face to face with a very serious question—i.e., whether the present sources of the water-supply can be correctly considered as adequate for future needs. It is time that the question was cleared from political considerations and regarded by all as THE LANCET has been most resolute to regard it—in the calmer light of a problem which must soon be grappled with on grounds of absolute necessity. The question is beset with difficulties while it is one upon which "slashing" articles can easily be written, but readers of THE LANCET will be able to preserve an equal mind in considering it, as they, like us, are fortified by the exact knowledge concerning the various companies contained in our Special Commissioner's report. It must not be forgotten that considerable confidence in the present sources of supply was inspired by the deliberations of sundry Royal Commissions on the subject and notably the last Commission presided over by Lord BALFOUR of BURLEIGH. We now know that some conclusions contained in the report of this Commission do not coincide with the evidence of experience and were founded on errors of reckoning and judgment. The occurrence of drought has swept away very many of the most important points which the Commissioners thought proper to emphasise. More especially is this so in regard to the sufficiency of water for future requirements from the present sources of supply. Assurance was conveyed by many experts, including the water companies' engineers, that the Thames, the Lee, and the companies' wells could be relied upon for an abundant supply of pure water for forty years to come, a supply equal, under strained circumstances, to the needs of an increasing population even when calculated at a probably

over-estimated rate. Within five years of this pronouncement being made public the Lee has failed, the East London Water Company's reservoirs are empty, the flow of the Thames is seriously diminished, wells are dry and the New River Company is drawing upon every possible source, the whole of the circumstances carrying the conviction that the supply is approaching a dangerous limit. We have to think now not so much of the efficiency of the particular undertakings as of the adequacy and fitness of the present sources of supply.

It would seem on the face of it that the present sources must be supplemented and several schemes which have been urged in the past have now been revived by the scarcity of water which has prevailed in the East-end of London on three recent occasions. The construction of large reservoirs in the Thames and Lee valleys capable of holding the enormous excess of water coming down during times of flood is one proposal. The chief and most powerful objection to this is that such water is almost certain to be polluted, either because the efficient treatment of sewage discharged into the streams is seriously interfered with during flood times or because the storm water itself contains the washings of highly manured land or the overflow of cesspools. Again, it is said that the Cotswold Hills could be made to furnish a pure and abundant supply of water. This statement is at variance, however, with the findings of a committee of engineering experts who have thoroughly surveyed the suggested new water area. More recently it has been proposed to intercept the enormous volume of water running to waste from the London basin southwards into the sea beneath our south and south-east coasts. Finally, there is the scheme which has perhaps been more seriously taken into consideration than the rest, as presenting a more satisfactory solution of the problem—the bringing of water from Wales. It may be instructive in this last connexion to review the facts connected with the steps which have been taken and are being taken in some of the greatest and most populous towns in this country. We refer to Liverpool, Manchester, and Birmingham. Liverpool led the way in 1880 by commencing the construction of an enormou reservoir in the valley of the Vyrnwy in Wales and of a conduit which measured 77 miles in length from the Town Hall to the reservoir outlet. Lake Vyrnwy, as the reservoir is now called, is said to be the largest artificial sheet of water in the world and its capacity is 13,125,000,000 gallons. The water flows to Liverpool by gravitation and the total quantity available is 40,000,000 gallons per day after allowing an abundant overflow for compensation purposes to the river. The scheme has proved satisfactory, and Liverpool now we believe possesses a pure and adequate water service. The total cost of the scheme will be close upon £4,000,000. In 1885 operations were commenced by the Manchester Corporation with the view of making the water of Lake Thirlmere, in Cumberland, available for the city of Manchester. The distance in this case is 96 miles. At present 10,000,000 gallons are delivered in Manchester per day, but this will shortly be increased, by adding more pipes, to 50,000,000 gallons per day. The total cost is thus estimated at between £4,000,000 and £5,000,000. Finally, the scheme of water-supply to Birmingham is proceeding at the present time and it is hoped that it will be completed in ten years.[1] In this case the watershed of the rivers Elan and Claerwen in mid-Wales was decided upon. The works were commenced by the construction of a railway in 1894 and the ceremony of the laying of the commemoration stone of the reservoir took place in May, 1897. Since that date the task of collecting the supply and bringing it 80 miles across country, through mountains and over valleys, has proceeded apace, with what final success remains to be seen. The estimated cost of the scheme, including the purchase of the watershed, was £6,500,000, but we believe that this will be exceeded, if it has not been so already. The supply will provide, it is said, for a period of fifty years in advance, and for this it is calculated that 60,000,000 gallons a day will be the maximum supply which Birmingham will then require in dry weather. With these schemes, accomplished and proceeding, it is of interest to turn to the plans placed by Sir A. BINNIE before the London County Council, by which it is proposed to acquire a watershed in Wales for the London supply, not in substitution of but rather to supplement the existing sources. Sir A. BINNIE looks to the valley of the Irvon, a tributary of the Wye, as the best available for the purpose. The shortest aqueduct to London would be 150 miles long. The cost of bringing the water from Wales to supplement the Thames supply would, it is stated, be £14,000,000, and to provide for a future period of fifty years the extra cost would be £12,000,000, making £26,000,000 in all.

It would be obviously premature to express adhesion to any new proposal without obtaining a full and comprehensive knowledge of all the factors concerned. That the question is, as we have said, beset with difficulties is evident from the fact that it is once more being approached by a Royal Commission, an account of whose sittings up to the present date we have published at some length. The President of the Local Government Board has promised to draw the attention of the chairman of this Commission, Lord LLANDAFF, to the recent failure of the supply in the East-end of London, when we shall be curious to see how the events of this summer are treated by the Commissioners. That the extent and mischief of the water famine have been exaggerated by some does not alter the fact that a serious breakdown occurred and it is quite possible that the Commission will attach much importance to it, even if it does not shape the ultimate report.

UNDER the heading of "The Ethics of Club Practice" we published last week a letter setting forth some of the difficulties of this kind of medical work and showing how easily the most careful practitioner may find himself blamed for that which he cannot help. The facts were as follows: The writer of the letter, a surgeon who had served his society without complaint for thirty years, was called on a Monday morning to attend one of the members who was

[1] An excellent and entertaining account of the progress of the works in connexion with the Birmingham scheme will be found in a book recently published under the title of "The Future Water-supply of Birmingham," by Thomas Barclay. London: Simpkin, Marshall, and Co. 1898.

suffering from quinsy. He saw him on that morning and promised to see him again on the following morning. When the Tuesday came there was an unforeseen pressure of duties and he could not see his patient at the time appointed. But he sent his qualified assistant, and the interval between the visits was, according to the patient himself, only twenty-six hours. When the assistant called he learned that the patient had called in another medical man living nearer. The quinsy soon disappeared, but obscure brain symptoms, apparently connected with a previous blow on the head came on. The patient was removed to a hospital to be watched with a view to operation. But the symptoms happily passed off. A few weeks later he wrote to the secretary of the society complaining in very strong language of having been neglected by the medical officer of the society and demanding from the latter payment of the bill of the second practitioner called in. Our correspondent refused to pay the bill on the ground that he was under no contract to see the patient at any given hour and that on any given day a medical man must himself be the judge of the urgency of cases and the order in which they should be seen. The second practitioner called in telephoned to the first as to the case and the latter assented to his taking charge of it. The facts seem very simple. Of course, we are writing on a statement of the case by the person inculpated. But the essential points seem to be admitted by the patient and we have no hesitation in expressing our opinion on them. Our correspondent seems chiefly anxious to know whether he can be compelled to pay the account incurred by the patient in calling a private practitioner to attend him. That is a legal question on which we pretend to speak with no special authority. We have no doubt that the surgeon of a society, under contract to attend its members and grossly failing to do so, would be liable in any reasonable amount for expenses incurred by his neglect. But whether in this individual case any such liability would be recognised we should think a matter of great doubt. An interval of twenty-six hours between visits in a case of quinsy is not an unreasonable one, and to say that a medical man fails in his duty because under stress of work he sends a fully qualified assistant in his stead is to advance a very questionable proposition and one which, we think, a county-court judge would be slow to endorse. No medical man can forecast one day what will be the nature of his duties the next, what will be the number of his cases, and what the respective urgency of each. No doubt an excitable man with quinsy would think his case bad enough, but the medical man might have a midwifery case or an accident, or a case of pneumonia, or a combination of such cases claiming his prior attention. Of this he must be the judge. Our correspondent's argument on the matter seems to us unanswerable, and it is strengthened by the letter which he publishes from the medical man who succeeded him in the charge of the case. This gentleman says that when he was called in the quinsy was actually on the decline and the secondary disease which supervened, and which was really the graver of the two, had not yet declared itself. The patient, who considered himself so badly used, "treated in a way not fit for any human being," may be comforted by knowing that what happened to him happens every day to the patients of private practitioners; for medical men have to take their rounds in a certain order, the order being determined chiefly by the comparative urgency of cases. We cannot think that on further reflection the patient in this case will think that he has treated the surgeon of his society with due consideration. Every practitioner requires, and is entitled to, some allowance at the hands of his patients, so impossible is it for him to prearrange his day exactly. Not only is he entitled to it, but in nine hundred and ninety-nine cases out of a thousand he receives it. Still more is the surgeon of a society entitled to it, because he is presumably attending a larger number of persons than a private practitioner and that for less remuneration, and especially when, as in this instance, his term of office has extended over thirty years and his work has secured for him the friendship and confidence of the members. Such a record is creditable to any medical man and to the society which he serves. It should almost suffice of itself to refute any charge of culpable neglect and certainly would appeal powerfully to any judge to whom the facts of the case might be referred.

Annotations.

"Ne quid nimis."

THE WORK OF THE GOVERNMENT LABORATORY.

WE believe that hitherto it was not the practice to issue a blue-book on the annual work of the Government Laboratory, the new departure apparently being commenced soon after Dr. Thorpe was appointed as principal two years ago. This would explain why two blue-books have been issued at the same time, one dealing with the work of the year ending March, 1897, and the other with the year ending March, 1898. The fact of the report of the work done being published in this official manner for the first time is alluded to incidentally in the 1897 report, where an explanation is offered of certain returns, "as this is the first report made direct to your lordships." We are surprised that this course has not been adopted before, since the important relation of this department to trade and commerce besides public administration is obvious. And, as we expected, the first blue-book contains some very interesting particulars. The work of the Inland Revenue branch of the Government Laboratory had its origin in controlling the strength of alcoholic liquors and other dutiable commodities. In short, its main object was to afford assistance to the Excise department and thus to secure the proper amount of Inland Revenue due on certain taxed goods. The work has now developed enormously, so that the chemical authorities are now consulted by the Government Offices in regard to the analysis of many trade products. At the present time samples are sent to the Government Laboratory by almost all the official departments of the Government Offices. During the official year 1897 the number of samples so referred amounted to a total of 2990. Amongst these were articles of food, drugs, disinfectants, oils, paints, fertilisers, &c. Under the Sale of Food and Drugs Act 65 samples were referred to the Government analysts as being cases under dispute. Of these 42 consisted of milk. On the whole, considering the number of samples examined annually by the public analysts in the United Kingdom, the result of reference is a tribute to the excellence and exactness of their work.

The 1897 report draws attention to a point which we have frequently raised in our columns. The Government Laboratory authorities had a number of proprietary disinfectants submitted to them, chiefly by the Board of Trade and the India Office, for the determination of their antiseptic and disinfectant properties. It is remarked that there is a growing tendency to offer as disinfectants various indefinite mixtures of tar products, containing small proportions of carbolic and cresylic acids, but chiefly consisting of neutral bodies of little or no antiseptic value. We thoroughly agree with the observation that the varying composition and antiseptic power of these preparations, which, as a rule, are waste products, offered at a low price, render their use as a class inadvisable and compel a resort to the much longer method of biological examination as a test of antiseptic efficiency instead of the briefer chemical analysis. In view of the importance of this subject we might have anticipated that the Government Laboratory authorities would have made some provision for examining the so-called disinfectant preparations on the lines indicated, but we find no further reference to the subject in the succeeding report of 1898. There is little doubt that the Government enter into large contracts for a supply of disinfectants at home and abroad, and the Government department should be able to declare the real efficiency or worthlessness of these preparations. The new Government Laboratories were completed in October, 1897, the premises being situated in Carey-street, near the Law Courts, so that there are now no chemists at Somerset House and the familiar term "Somerset House referees" must in future be omitted. Considerable work has been done during the past official year with beer in order to effect a more satisfactory control over the dilution of beer with water. 14 per cent. of the samples examined were found to have been diluted and in one case the dilution was equivalent to 10·9 gallons of water in the barrel of 36 gallons. The practice by retailers of diluting beer appears to have been confined to London. Tobacco does not appear to be free from unscrupulous tricks, for of 60 samples taken 35 were found to be genuine and 25 adulterated. This probably refers to excessive moisture and mineral matter. The department, we venture to suggest, might turn its attention to the question of foreign flavouring substances in tobacco. As in previous years, the samples referred to the Government Laboratory as cases in dispute consisted largely of milk. Of 39 samples of this class 29 cases were upheld. The only serious differences occurring at all under this section were connected with samples of lard and spirits. On the whole, however, the 1898 report affords once more a testimonial to the skill and efficiency of the work done by public analysts. According to the recommendations of a Select Committee which will be embodied in a Bill to be introduced to the House of Commons next Session the relations existing between the Government analysts as referees and the public analysts at large should be still more satisfactory, so that probably a greater proportion of the cases under dispute will be officially confirmed by the chemists of the new Government Laboratory.

THE MEDICAL PROFESSION AND MASSAGE ESTABLISHMENTS.

AT length the proprietor of a massage house has been laid by the heels and sentenced to six months' imprisonment with hard labour for assault and, under the new Vagrancy Act, to three months' imprisonment with hard labour for "knowingly living wholly or in part on the earnings of prostitution." The name of this blackguard is James Davis and he lived at 120, Marylebone-road. We are not so much concerned with the immorality of his proceedings, but we might mention that we fail to see why hardworking taxpayers should support a person of this description for nine months, feed him and keep a roof over his head. A sound flogging every other day for a week would be much cheaper and would hurt a good deal more. However, that is not the point with which we wish to deal. The house in question nominally existed as an establishment where definite medical treatment—i.e., massage—was given. It was called the "Balneopathic Institute for the Treatment of Rheumatism, Gout, Sciatica, and Neuralgia by Dry Hot-air Baths, Massage, &c." As a matter of fact, it was nothing more or less than a brothel. Now, brothels have existed in large towns from the time of ancient Babylon downwards and we suppose they always will exist. With that we have nothing to do. But, as we said on a former occasion[1] when commenting upon massage establishments, such houses should not be allowed to masquerade under the name of places for legitimate medical treatment. A woman who gave evidence as one who attended when the house was short of "nurses" said that she knew nothing about massage but that she gave treatment with the birch. Gentlemen who underwent this treatment used to be known to our ancestors by the name of "flogging cullies," and further details need not be gone into. We can only hope that the remaining houses of this description—and there are plenty of them in other parishes than St. Marylebone—will be suppressed in as vigorous a manner.

THE ROYAL MEDICAL BENEVOLENT COLLEGE

THAT there is a turning point in the fortunes of most men is a recognised truism and that this also applies to many institutions has been proved over and over again. In another column we publish an appeal on behalf of the Royal Medical Benevolent College at Epsom, from which it would appear that after doing a steadily increasing amount of good work for more than forty years the institution has at last arrived at the road leading to well-deserved prosperity; but whether this desired goal is to be eventually reached depends, we feel quite sure, upon the extent of the support given now and in the future by the rank and file of the profession. The appeal puts the matter in a nutshell when it states: "If each member of the profession would give 10*s.* or even 5*s.* a year for a very few years the position of the pensioners and foundation scholars would be placed on a secure financial basis and the Council would be able to improve the school and extend its usefulness still more." Though substantial help from comparatively a few leading practitioners must be very welcome it may be safely asserted that the permanent success of the College can best be secured by the small contributions of many thousands of supporters. We would observe for the information of those not well acquainted with the work carried on by this important institution that there are two distinct branches—namely, charitable and educational. On the benevolent side 50 pensioners receive annuities and 50 foundation scholars are boarded, clothed, educated, and maintained, the total liabilities of this branch exceeding £6000 per annum. On the scholastic side a thoroughly sound public school training is given to the sons of medical men and others, the fees charged to members of the profession being considerably reduced, and in addition valuable exhibitions and scholarships are offered. It should be noted that these observations refer only to the work actually done by the College out of its general funds and not to the special annuities, scholarships, and exhibitions provided by generous benefactors. An important period in the history of the College was the year 1895, when the maximum amount of good that could possibly be accomplished was being carried out on both sides of the institution. The school was in a

[1] THE LANCET, Feb. 20th, 1897, p. 538.

flourishing condition and for some time had been quite full, so that the Council decided after mature consideration to extend the accommodation by building a lower or junior school and at the same time to enlarge the chapel and build a laundry, works which have all been completed. As to the charity, that had for several years been maintaining the full number of pensioners and foundation scholars, and, owing to a munificent legacy from a Melbourne practitioner, the annuities of all non-resident pensioners had been raised from £21 to £30 per annum. As some of our readers will recall to mind, the increase in the amount of the non-resident pensions was a matter in which for years we took a deep interest; in fact, in 1892 we had the pleasure of handing the sum of £1000 to the treasurer, Dr. Holman, who was the originator of the movement, to be the nucleus of a fund to provide increased annuities for those who preferred to live away from the asylum. We were unable to shut our eyes to the fact that it was not a kindness to take aged ladies and gentlemen away from old beloved associations to end their days amongst strangers; and, moreover, it hardly seemed to be a judicious course to train boys for a medical life with the few sad failures of the profession constantly before their eyes. It may be asked, How can medical men help on the good work of the College? There are several ways. First, by contributing an annual subscription of any amount from 5*s*. upwards; secondly, by procuring contributions from the public, who are under a debt of obligation to the profession; thirdly, by sending their own sons to the College, where they will receive a first-class education at a moderate charge; and, lastly, by drawing the attention of those outside the profession to the many educational advantages offered at Epsom. That the school has for one of its size a thorough good record to show in successes gained at the universities and at the medical schools in London we can assure our readers, and the authorities at the College will no doubt willingly give to applicants detailed information as to honours gained in past years. In thus supplementing the appeal of the Council for increased support, which we have much pleasure in doing, it will be interesting to recall to mind an observation made by us long before the College was actually incorporated. In THE LANCET of May 3rd, 1851, we wrote—and it is hardly necessary to state that the observation still accurately expresses our views: "For the objects of the institution whether for eleemosynary or educational purposes we have but one word and one thought—that of hearty coöperation and support."

MIDWIVES AND THE DEATHS OF CHILDREN.

THE death of Joseph Sartori, three days old, at Windsor, has been the subject of a coroner's inquest. The mother was attended by a certified midwife, Mrs. Taylor. Mrs. Taylor had attended her in two previous confinements. On this occasion she was with the patient for seven hours, and an hour before the birth she administered a dose of ergot which, she said, had been her custom in the circumstances for twenty-six years without bad effects. On the day of the birth, a Tuesday, the infant passed blood with the urine. The next day the midwife did not call but sent her daughter. The daughter was asked to tell her mother of the blood in the urine. On Thursday Mrs. Taylor called. There was no mistake about hæmaturia and she advised that if the child was not better the next day a medical man should be sent for. Next day she came and finding the child very ill she took it well wrapped up to Mr. W. L. Goodridge, who found it moribund. In spite of the measures prescribed the child died on the way home. The coroner did not order a post-mortem examination, which we regret, but Mr. Goodridge saw the body after death. There was great abdominal distension, and a catheter passed into the bladder showed it to be empty. He attributed death to inflammation of the kidney. At the inquest he expressed his own opinion and that of the profession on the objections to giving ergot during labour, and especially to midwives being allowed to do so. He said that a Bill to be introduced into Parliament next year would make this a matter of criminal procedure. He thought that there was no evidence to show neglect at birth and that there was no mark of violence. The jury returned a verdict of "Death from natural causes." We approve the verdict but the case shows the importance of midwives' work being supervised by a medical man. For three days hæmaturia and probably nephritis were going on. If Mr. Goodridge had been called in on the first day when it was seen it is very probable the result might have been different. The coroner very properly objected to such young children being taken out, especially in such circumstances. The cause of the hæmaturia is uncertain and its relation to an alleged fall of the mother during her pregnancy is equally so. We do not associate it with the drug administered to the mother by the midwife, though we agree entirely with Mr. Goodridge in his objection to this practice. The inquest is valuable as showing the ignorance of midwives in this custom and the general disadvantage of mother and child in the absence of intelligent medical advice.

RESTORATION OF SEVERED PARTS.

THE possibility of restoring severed parts, even under unfavourable circumstances, is not so generally appreciated as it should be, and attempts which might be successful are not made. Lately we published three cases in which the severed external ear was successfully replaced.[1] In one (Dr. Brown's) the circumstances were anything but encouraging. The ear had been bitten off by a horse and was found lying in a stable yard. Neither surgical instruments nor antiseptics were available: a common needle and thread had to be used. In the other two cases (Dr. Purcell's) the surgeon adopted the ingenious plan of keeping the ear warm and endeavouring to restore the circulation by hot salt bags. We do not know of any other instances in the attempt to restore severed parts in which this had been done. To what extent it is useful is difficult to say; at any rate, it is rational. Several cases of union of severed finger tips are recorded. In the *Johns Hopkins' Bulletin*, Oct.–Nov., 1892, Dr. Finney has published a case of successful suture of severed finger-tips after seven hours. The middle finger was cut off just below the last joint through the phalanx, the ring finger at the root of the nail. The raw surfaces were freshened and the tips were attached each by four sutures. Dr. Finney used antiseptic dressings but not solutions, because bichloride of mercury and carbolic acid produce a thin layer of coagulation necrosis. The wounds united by first intention. In a recent number of the *New York Medical Journal* appears an account of the following case, published in the *Louisville Medical Monthly* by Dr. John Cooke Laurens. A coloured man in using a heavy axe cut through his shoe and severed the metatarsal bone of the first toe through the head, completely disarticulating the toe, and also cut off the second toe in front of the metatarsal joint. He was seen four hours afterwards. The shoe and sock were cut away and the second toe was found separated, whilst the first was hanging by a mere string of skin, every muscle and vessel being cut. They were united by interrupted sutures which included the tendons. A dressing of iodoform and boric acid, equal parts, was used and a splint was applied. The iodoform had to be discontinued because it proved

[1] THE LANCET, June 4th and 11th, 1898.

irritating. Union by first intention occurred over more than half the wound and there was but little pus where granulation took place. On the third day sensibility was present in both toes and in a week the patient could move them a little. Finally they were strong, moveable, and sensible, and except for a little tenderness the foot was as good as ever.

THE DINNER TO PROFESSOR VIRCHOW.

DR. ROSE BRADFORD, Mr. Andrew Clark, and Mr. D'Arcy Power inform us that after paying the expenses of the recent successful dinner given to Professor Virchow by the English medical profession there remained a balance of between £7 and £8. This sum they propose to hand over to the British Medical Benevolent Fund.

PERSECUTION FOR RETICENCE.

A LIBEL case has recently been decided by the Budapest courts which is of interest to medical men as showing the dangers to which the profession is exposed. A member of the Hungarian Parliament, who is both a barrister and the editor of a monthly journal, had a son who recently died from phthisis at the age of nineteen years, having been under the care of the family doctor for some time, several consultants having also seen him. After the lad's death the father published in his own magazine a series of articles charging the practitioner with ignorance and negligence, because he had for some time avoided declaring the "dangerous and infectious nature of the disease," and so contributed to its fatal issue and endangered the lives of other members of the family. These articles so affected the medical man that he committed suicide. His son, however, who is also a medical man, brought an action against the member of Parliament, who has had to pay £25 and costs.

THE POLLUTION OF THE RIVER RODING.

AT a time when the suggestion to utilise the upper reaches of the Roding for supplementing the supply of the East London Water Company to certain urban districts in the County of Essex is receiving serious attention, it is of interest to note that the County Council has decided to take prompt action in order to restrain a number of sanitary authorities from continuing to pollute it with partially purified sewage effluents. The river rises in a thinly populated portion of the county called the Roothings, but the whole watershed is under cultivation and the various tributaries are all believed to be more or less polluted with the sewage from farms and groups of houses. Lower down it receives all the sewage of Ongar, Abridge, and other villages, and still nearer its junction with the Thames it receives all the effluents from seven different sewage works. Below Abridge Dr. Thresh reported that the river was simply an open sewer. A committee appointed by the County Council has inspected the stream and endorses the medical officer's report, the chairman of the Sanitary Committee remarking at the recent meeting of the Council that the condition of the river was a "disgrace to civilisation." The Council delegated to the Sanitary Committee all its powers under the Rivers Pollution Act in order that proceedings may be taken, if necessary, "against each of the local authorities or persons who are fouling the stream with a view to the immediate abatement of the nuisance." Dr. Thresh in his report strongly recommends the construction of a main sewer to drain the whole of the Roding Valley, from Loughton downwards, as being at once the most economical and the only permanent method of freeing the river from pollution. The population in the lower portion of the valley is increasing enormously and all the present sewage-disposal works are admitted to be more or less inadequate. The scheme is meeting with very favourable consideration and if carried out will in the future be a great boon to the district. It is also gratifying to find that the County Council at the same meeting showed its appreciation of the services of its medical officer of health by increasing his salary from £800 to £1000 per annum.

HOSPITAL SATURDAY.

SATURDAY, Oct. 15th, was observed throughout the metropolis as Hospital Saturday and we are glad to be able to note that in deference to a very widely expressed desire the street collections were abandoned. Street collecting is a method to which we have always taken exception, and latterly it became impossible to walk along the streets at any season of the year or any hour of the day without being pestered for money ostensibly on behalf of some charity, which in many cases no doubt never existed except in the minds of some speculator who sent out collectors. The change now made by the committee of the Hospital Saturday Fund has been for some time in the air, since for many years past the street collections had been falling off while the workshop collections had been increasing. This year collecting cards and sheets have been issued to the ladies who formerly took part in the street collections and it is to be hoped that the ultimate results will not show a deficit at any rate, if, indeed, they do not show an increase, upon the sum total of former years.

PNEUMONIA AND THE NAPLES INSTITUTE OF SEROTHERAPY.

OUR Rome Correspondent writes:—"Of the medical congresses now drawing to a close none have equalled in importance and interest that recently held at Turin, if only for the discussion it evoked on the 'Siero Antipneumonico' devised by Professor De Renzi and Professor Pane of the Naples school and prepared by them for distribution at the 'Istituto Sieroterapico' of that city. Professor Pane, who holds the chair of Medical Pathology, was able to announce at the Congress that in a series of experiments on animals and by means of special cultures they had obtained a pneumococcus more virulent than any other hitherto found by workers in the same field. This given in doses of the culture so minute as to be barely appreciable (*un miliardesimo di c.c. della coltura*) kills a full-sized rabbit in a few hours. Inoculating the ass, the horse, and the cow with the culture in progressively increased quantities they yet succeeded in immunising the said quadrupeds from doses of the pneumococcus which would 'many times over' have proved fatal to any non-vaccinated animal. The serum of these animals they found to possess therapeutic virtues of special power in antagonising pneumonia. Before, however, experimenting on the human subject Professor Pane and his colleague and coadjutor, Professor De Renzi, tested their serum on the lower animals. Inoculating a rabbit with a culture of pneumococcus ten and even twenty times fatal they were able to 'antagonise the tendency to death' by following up the inoculation in question with a minute proportion of the serum. Repeated experiments, checked and counterchecked to obviate every vitiating fallacy, satisfied them that their serum had power to neutralise and subdue all infections, however acute and however fatal, communicable by the pneumococcus. In the hands of their colleagues, Dr. Vincenzo de Giaxa, professor of hygiene; Dr. Luciano Armanni, who holds the chair of pathological histology; and Dr. Giuseppe Boccardi, demonstrator in microscopic anatomy, identical results were obtained. Thereafter they proceeded to inject their serum in a patient suffering from typical pneumonia and at once witnessed a perceptible abatement of the temperature,

an easier and fuller respiration, a marked extension of the sound lung, the pulse and the arterial pressure being more accentuated, the heart gaining strength and the right ventricle completely emptying. The physiognomic signs told a similar tale and the patient felt such general relief as to crave for 'another injection.' In the discussion which followed Professor Pane's paper Professor Maragliano (Genoa), Professor Murri (Bologna), Professor Bozzolo (Turin), Professor Cantieri and Professor Bordoni (Siena), Professor Queirolo and Prosessor Silvestrini (Pisa), and many others hardly less distinguished took part, when the Neapolitan physicians, in answer to objections and interrogations, were able to adduce confirmatory cures by their serum of aggravated senile pneumonia, of pregnant women suffering from the same disease, and of patients with pneumonia complicated with various forms of cachexia. Among the most gratifying testimonies to its virtues was that of Dr. Belfanti, director of the Istituto Sieroterapico of Milan, who confessed that he had not been able to isolate a pneumococcus so virulent as that of Professor Pane and Professor De Renzi. He had just succeeded in preparing a bactericidal and preventive serum, but not a curative one or such as would prove effective in cases of pneumonia. Professor Bozzolo added his own experience to that of the able Milanese bacteriologist, and contributed to justify the expectation of the Congress that pneumonia will ere long cease to hold a formidable place in the roll of diseases."

YORK MEDICAL SOCIETY.

THE first meeting of the present session of the York Medical Society was held on Oct. 12th, the President, Mr. F. Shann, being in the chair. Dr. Lauder Brunton delivered an inaugural address on the subject of "Exercise and Over-exercise" which contained much excellent advice on the value of judiciously regulated exercise. Certain points in this interesting address are more particularly noteworthy. The sanitary value of physical exertion, the speaker observed, consists largely in the fact that it calls into play successively different muscles, affording to each alternate rest and action. This was what constituted the advantage possessed by an athletic game over a mere "constitutional." Some games, again, were preferable for the same reason. Lawn tennis and polo were pre-eminent as promoting more general movement than most others, cricket not excepted. On the other hand, no caution was more necessary than that which avoids excess in exercise, for this, far from promoting physical development, was an actual cause of exhaustion and consequent enfeeblement. Moderation in exertion, as in other things, was a relative term dependent on personal conditions. Among such two were of primary importance: (1) the strength of the heart, which ought always to be taken as the gauge of what was advisable in amount of exercise; and (2) the mental state in relation either to fatigue or anxiety. Both of these considerations were apt to be overlooked in the training of boys (and doubtless of girls also). Every thinking person must feel the force of these observations. The subject they deal with can at no age become antiquated, and of this we are daily reminded by the evident extension of the athletic habit in varying, not always judiciously varying, degrees among persons of all ages. The custom of bodily exercise is in our time not merely a part of education or even a recreation. It owes its present practically universal prevalence to being what it truly is, an important stage in sanitary evolution. In order that it should maintain itself and develop in this character it will be needful to bear in mind such counsels as those which we have just quoted. If not thus regulated it must prove, as it already has proved to many even in youth, a burden and a weakness. We are glad to see that Dr. Brunton condemned that dreary form of exercise known as "taking a walk." Not that we or he either mean by this a good country walk, but the dignified constitutional known at small schools. If we may judge by such works as "Henry Milner" and the "Fairchild Family" this was about the only form of exercise known to our grandfathers when children, and a very dull and sedate occupation it must have been, though, if we remember rightly, the rigours of the Fairchild children's day were once lightened by being taken to see a murderer hanging in chains. Dr. Brunton omitted two forms of exercise which, to our mind, are excellent—namely, rowing and fives. The latter game should, of course, be played in an open court. The exigencies of our modern civilisation, however, make it increasingly difficult for workers, in London at any rate, to take exercise, for by the time their day's work is done they are generally too tired to go six or seven miles to a river, a lawn tennis court, or a golf links. But even so we as a nation probably take more healthful exercise than any other, and long may we continue to do so.

THE ADULTERATION OF FOOD ON SUNDAYS.

THERE is an old adage which has it that "the better the day the better the deed," but we hardly expect that those who practise the adulteration of food on Sunday and supply nothing but the genuine article on week-days will urge this as an excuse for their moral obliquity. Be this as it may, satisfaction is to be found in the fact that the public analyst of Islington has succeeded in catching some of these adulterators of our Sunday milk-supply unawares, and we read in the last quarterly report of Mr. Harris, the medical officer of health of Islington, that of 30 samples collected on week-days all were genuine, whereas out of 48 collected on Sunday 6·2 per cent. were adulterated. This is by no means the first record which suggests that the milk vendor believes that the sanitary inspector, like most of his fellow citizens, takes a well-earned rest on Sunday; but it is to be hoped that the experiences of Islington will show both to sanitary authorities and to the vendors of food stuffs the need for vigilance on that day. Perhaps if adulterators were in all cases fined double for adulterations actually performed on Sundays the public might feel in a more secure position than is at present the case.

MILITARY SANATORIA.

ACCORDING to a contemporary (the *Evening Standard* of Oct. 7th) the King of the Belgians, who is a remarkably astute and business-like monarch, has suggested a commendable idea for military sanatoria. The Congo State has occupied a good deal of his attention. One of the greatest drawbacks to the expansion of European rule in West Africa is the deadly climate and the difficulty of dealing satisfactorily with fever-stricken troops. If they remain at their posts they run every risk of succumbing; if they are brought back to northern Europe the sudden transition from a tropical temperature to the chills and damps of their own temperate countries may also prove disastrous. King Leopold, therefore, has in view the establishment of a sanatorium within reasonable touch of the Congo territories which shall be at once genial and free from malaria. North-Western Morocco was at first suggested, but a second and decidedly better scheme has presented itself and is in fair way of being carried through. The Canary Islands are considerably nearer the west coast than Morocco is and lie in the direct route of the Congo steamers. Their climatic conditions are too well known to medical men to need any remarks. A medical commission has left Antwerp for Las Palmas to choose the site for the sanatorium and the King has placed 25,000 francs at the head of the subscription list by which the necessary funds

are to be raised. It has always been the custom of our military medical service to provide hospital steamers for the reception of fever cases amongst our troops whenever large numbers have been on active service in malarial districts, but the establishment of a permanent sanatorium in a climate such as that of the Canaries, within easy reach of our West African dependencies, is certainly a plan well worthy of the consideration of the authorities of the Royal Army Medical Corps. English troops are constantly quartered in those districts and many valuable lives might be saved to our army by such an institution.

THE NEW ENTRIES AT THE MEDICAL SCHOOLS.

ALTHOUGH the London Medical Schools have now commenced the work of the winter session the number of new entries is not yet complete, but it would seem from the figures we have received from some of the schools that there has been a falling off in the number of new entries. At the present time it would be invidious to publish and compare the figures which have been kindly supplied to us by some of the deans and, moreover, from some of the schools we have not received exactly the information which we asked for. When the list is more complete we hope to publish a full analysis of the figures.

LIGATURE OF A RUPTURED MESENTERIC ARTERY.

ONE of the rarest lesions in a "buffer accident" is a rupture of a branch of one of the mesenteric arteries. Such an accident occurred recently to a railway porter and he was admitted in a state of collapse into the Royal Free Hospital. As the collapse seemed to diminish, operation was temporarily postponed, but later, as it was again increasing, it was decided to operate. Mr. E. W. Roughton opened the abdomen and found that one of the vasa intestini tenuis had been torn through about 1 in. from its origin. The distal end was bleeding freely and both ends were tied. The peritoneal cavity contained much blood and the collapse was so extreme that saline transfusion was resorted to during the operation. The man has so far gone on well, and as ten days have now elapsed since the operation he will in all probability recover. We hope shortly to give a more detailed account of this case.

HEALTH AT THE POST OFFICE.

THE criticism which pursues all public utterances has overtaken that part of the Postmaster-General's annual report which relates to the health of the staff. An article recently published in the *Telegraph Chronicle* takes exception to the report chiefly on account of its want of detail and precision in dealing with this subject. The writer objects, for example, that while apoplexy and pneumonia are represented by a considerable mortality there is no indication of the class of employés affected by them. The same statement is made with regard to phthisis, while it is further evident from the published returns that cases of this disease resulting either in death or superannuation are about one-fourth more frequent than in ordinary life, notwithstanding that Post Office employés are primarily selected persons. The ratio given is 2·2 per 1000, as compared with 1·6 per 1000. It is contended, in the absence of evidence to the contrary, that phthisis is most rife among telegraphists and is attributable to overwork within doors, that it is a preventable disease, and that no steps have been taken for its prevention. Want of precision in treating of sanitary matters is doubtless common to many official reports besides that issued by the Post Office. Nor is the prevalence of phthisis among in-door workers by any means limited to this or other public offices. A greater degree of exactness in the statement of such details is nevertheless attainable without much difficulty and it is certainly desirable as bearing upon the causes and prevention of communicable diseases. Phthisis is an example of particular interest. With regard to it there is certainly no method so effectual as the exclusion of all employés affected by it—necessarily, of course, by a process analogous to superannuation. The physical examination prior to entrance should also, in our opinion, be made to exclude applicants with a markedly phthisical family history.

UNIVERSITY COLLEGE, LIVERPOOL.

LIVERPOOL is certainly much better off than London as regards the ability to get money for scientific researches and other work. The other day at the opening of the Thompson-Yates Laboratories Mr. Glazebrook, the Principal, mentioned that the University College was still in need of a properly equipped anatomy school. His words have borne immediate fruit. At the meeting of the governors of the College held on Oct. 15th the Earl of Derby, President of the College, who was in the chair, mentioned that Professor Lodge was in need of a physical laboratory and that he himself would be happy to give £5000 towards its erection—that is to say, one quarter of the sum necessary. He also said that he had received a cheque for £2000 from Mr. Ralph Brocklebank towards new buildings for the medical school. We learn that the next block of the College to be built includes laboratories, theatre and museum for the study of anatomy, and will cost about £15,000. The citizens of Liverpool are to be warmly congratulated upon their princely generosity. Some day, perhaps, we may arrive at this sort of thing in London, but we fear it will be a long time. London is so vast, so decentralised, that though enormous sums are given every year yet there never seems to be any tangible result, while the average citizen's money is so taken up with compulsory taxes that by the time he has paid his School Board rate, County Council rate, free library rate, baths and washhouses rate, and other things he begins to think that he has done enough.

ANOTHER STREET DANGER.

THE dangers of the London streets are necessarily so many and varied that anything which adds to them unnecessarily should be at once put down with a firm hand. On Oct. 13th Dr. Danford Thomas held an inquest at the Paddington Coroners' Court upon the body of a woman who was knocked down and run over by a coal wagon. Evidence showed that she was crossing Malvern-road, Kilburn, on the night of the 8th inst. when she met with the accident which proved fatal. The driver of the coal wagon said that when he reached the junction of Malvern-road and Cambridge-road a flash-light suddenly came on his horse and made it bolt. The son of the deceased said that the flash-light came from the first-floor front window of a shop. The driver of the wagon did all he could to hold in his horse. A reporter in court informed the coroner that the London County Council are making inquiries as to the use of such lights and a solicitor representing the owners of the coal wagon said that if such lights were to be proved a nuisance and danger an injunction could be obtained to stop their use. A constable said that the shopkeeper had been invited to attend the inquest, but that he had refused to come. A verdict of "Accidental Death" was returned, the jury adding a rider to the effect that they condemned the practice of using lights in this manner. The custom of course is one which should be made absolutely illegal and so also should the use of those illuminated advertisements, of which there are several examples round Trafalgar-square and in Knightsbridge—those, we mean, which light up the street vividly at one moment and leave it in comparative darkness the next.

Such alternations are enough to confuse any horse, to say nothing of any unfortunate foot passenger who may chance to be crossing the road at the moment when the light goes out. The roundabout process of getting an injunction is very lengthy and expensive. We are still waiting patiently for the Streets' Bill which we hope the London County Council will one day succeed in getting passed.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

AT the meeting of the Council of the Irish Medical Schools' and Graduates' Association held on Oct. 12th Dr. T. Gilbart Smith was elected Chairman of Council, vice Dr. P. S. Abraham, whose three years' tenure of office will expire at the end of the present month. At the same meeting it was determined to entertain Sir William Mac Cormac as the guest of the association at the autumn banquet, to take place on Nov. 23rd at the Café Monico, with the President, Dr. E. D. Mapother, in the chair.

AN EXTRAORDINARY EXPLOSION AT SEA.

A HOMEWARD-BOUND vessel carrying a cargo of petroleum and naphtha suddenly blew up on Monday last without any apparent warning close to the Tongue bank of the North Foreland. Several lives were lost and the ship speedily became a total wreck. The force of the explosion was enormous, particles of wreckage being hurled 300 ft. into the air. It was stated that the smell of naphtha was so strong during the voyage from New York as to be almost overpowering. Notwithstanding all warning and precautions it is practically certain that in some way or other the vapour became ignited, and this implies that it got access to a naked light. Two points are worthy of notice: first, that the barrels could not have been tight, and, secondly, that the hold in which they were stored freely admitted the escape of vapour to other parts of the ship. Are these conditions in accordance with Board of Trade requirements? Such an inflammable cargo should surely be battened down as tightly as possible in the hold and a proper vent provided. Further, the hold could be filled with carbonic acid gas which now, in the form of liquid in steel tubes, is as common an article of commerce as many other things. These tubes would be useful, too, in a case of fire in the hold. It would probably be more difficult to ensure tight barrels, because however sound they may be at the start the constant rolling of the ship during the voyage introduces the risk of leakage by reason of hoops, staves, and heads getting loose.

POISONING BY ATRIPLEX.

IN a recently issued collection of the reports of the medical officers of the Chinese Imperial Maritime Customs,[1] Dr. J. J. Matignon, of the French Legation in Pekin, gives a lengthy account, in French, of singular toxic effects produced by eating the shoots of the *arroche* (atriplex serrata), a plant belonging to the natural order Chenopodiaceæ and growing abundantly in the gardens and along the walls of the Chinese houses. The sufferers were almost invariably of the lowest social class—mendicants, in fact—and almost invariably females. The principal symptoms were localised œdema of the face, hands, and forearms, impairment of muscular power, of sensation, and of circulation, and dermatitis, often leading to the formation of scars in the œdematous regions. The tops of the young plant are eaten by the Chinese lower class almost raw, embedded in dough, which is made into rolls and gently steamed, or else in the form of salad. All Dr. Matignon's patients said that they had partaken of the plant on an average from ten to twenty hours before the first appearance of the toxic symptoms. These peculiar effects are well known to the Chinese, but they never occur to those who are careful to wash the plant thoroughly and to cook it before eating, which makes it probable that the poison is not inherent in the plant but is perhaps due to an aphis (*puceron*) found in the shoots. The first cases generally occur in the month of May. The destitute persons who are most liable to be affected do not take the trouble to wash the plant before eating it and the preponderance of attacks among women is probably due to their lower state of health in comparison with that of men. In 1895, when food was very dear on account of the war with Japan, more than 20 cases of atriplex poisoning were treated in the Nan T'ang Hospital; in 1896 food was more plentiful and only 2 cases were admitted; whilst in 1897 there was only 1 case. The attack is sudden and almost always begins with painful swelling of the hands. Œdema of the hands commences half an hour or three-quarters of an hour after the first onset of the painful symptoms; it is, in fact, very probably the initial symptom, resulting from toxic vaso-motor paralysis. Œdema of the face begins a few hours after that of the hands; it usually affects the eyelids, lips, and cheeks, rendering the patient quite unrecognisable in a few hours and totally unable to see for two or three days. Itching of the backs of the hands is almost constant and is felt also in the face; the rubbing and scratching of the patient produce extensive ecchymoses in which there form vesicles filled with yellow serum, and these may coalesce into bullæ as large as a five-franc piece. In mild cases the œdema of the face disappears in two or three days, but when it is well marked it may continue for a week; the œdema of the back of the hands always lasts longer than that of the face and requires at least ten days in severe cases for resolution. The affection of the skin ends either in resolution of the infiltration, accompanied by desquamation of the epidermis, or else in ulceration, which cicatrises slowly. Dr. Matignon points out that there is some analogy between these symptoms and those of both Raynaud's disease and erythromelalgia (Weir Mitchell's disease). A number of experiments showed that rubbing the fresh plant on the hands and face had no ill effect.

[1] P. S. King and Son, King-street, Westminster.

THE DIRECT CONVERSION OF COAL INTO ELECTRICITY.

SINCE the transformation of the heat of combustion of coal into mechanical work by the aid of furnaces, boilers, and engines gives a loss of 85 per cent. of the total energy it follows that the production of the electric light by present means is, to say the least, wasteful. In short, it is a roundabout way of utilising the energy of coal by first burning it, then utilising the heat so evolved to convert water into steam, and finally to use the pent-up steam as a propulsive power for the dynamo. The energy thus absorbed and rendered inactive for the final purpose is enormous. If only a short cut could be taken or, in other words, the energy latent in the coal could be employed direct, then electricity would afford a solace to modern existence. The ideal would be a scuttle not to store a convenient supply of coals in, but into which a load or shovelful could be placed as the current required to be kept up. In other words, if the scuttle could be made the generating centre which would work faithfully so long as coal were supplied and containing a fluid which would quietly oxidise the element (for coal is mainly carbon), yielding the chemical energy and hence electric energy of the fuel which could be made available along wires for heating and lighting purposes, the problem of utilising electricity in the house would be solved and gas, wood, and coal and their attendant nuisances for ever banished. It must be admitted that such an attainment would be an ideal and a

comfort far beyond all other devices directed towards obtaining a healthy equilibrium in household affairs. Yet such is not beyond the bounds of possibility, for the energies of investigators are being concentrated upon the prospects of being able to turn coal to account for the direct production of an electric current. If coal can be made the positive element in a battery the problem is solved, and this is exactly the direction in which recent investigation has turned, and not without hope. This accomplished, however, everything would depend upon our coal-supply and the time during which it would hold out. Coal is a source of force with which fortunately nature has abundantly supplied us, and by the time this has failed we shall probably have arrived at new methods of utilising natural force, as in the rise and fall of tides and the flow of water, on a scale which will provide the whole community with power and to spare.

PHOTOGRAPHIC EFFECTS PRODUCED BY BACTERIA.

THE "rapid" dry photographic plate with its extremely sensitive film has become a most remarkable aid to knowledge. It has brought countless stars to view which otherwise had escaped observation even with powerful instruments and it has more recently demonstrated the existence of dark light, so to speak—i.e., of radiations which are not realised by the eye, having no apparent effect upon the optic nerve. Recent experiments have shown that almost all substances give off a dark radiation or, at any rate, something which affects the sensitive silver film. This has been attributed to the throwing off of vapour in minute quantity, but sufficiently to act upon the photographic plate in the same way as actinic rays. Dr. Percy Frankland has now shown that certain bacteria have the property of producing images. With some organisms the effect is obtained when the sensitised plate is placed at a distance of half an inch over the culture, whilst when in contact with the film definite pictures of the bacterial growths result. Since the interposition of a piece of glass prevents the action it is probable that the action is due to the evolution of volatile chemical substances. But with phosphorescent bacteria the phenomenon is evidently a different one, since the interposition of glass makes no difference, the organisms emitting a radiation which traverses the glass easily. It is suggested that it is quite possible that considerable differences as regards activity towards a photographic plate may be found to exist with different bacteria, in which case this property may become of importance in their diagnosis. If the method could be applied to the identification of typhoid fever and cholera bacilli in water its value in the service of public health would indeed be great.

THE SMOKE NUISANCE.

IN Dr. Gwynn's presidential address to the Incorporated Society of Medical Officers of Health, an abstract of which we give in another column, it will be seen that he is dissatisfied with the way in which sanitary authorities neglect the Smoke Acts. As long, however, as magistrates deal with offences under these Acts in the lenient way in which some magistrates do or did deal with them, so long will there be small inducement to sanitary authorities to prosecute. The Public Control Committee of the London County Council has just issued a report in which the various steps taken to deal with the smoke nuisance in London are set forth. We are glad to see that the committee mentions that the view taken by certain metropolitan magistrates that difficulty in obtaining smokeless coal was a reason which justified persons in causing a serious nuisance was to be regretted. In our issue of June 25th we said the same thing when commenting upon a decision of Sir James Vaughan. To say that it is allowable to make black smoke because smokeless coal is unobtainable is absurd. To slightly modify the remarks of Mr. Gilbert's "Mikado," "That's the slovenly way in which these Acts are drawn. There is nothing about not being able to get smokeless coal, or not knowing," but the Act says that "Any chimney not being the chimney of a private dwelling-house sending forth black smoke in such quantity as to be a nuisance shall be deemed to be a nuisance liable to be dealt with summarily." The electric lighting companies were the chief offenders, but the great hotels and restaurants, and at one time the National Liberal Club, were also conspicuous examples of how to foul an atmosphere which is at no time too clear. We hope the London County Council will continue its crusade, for its public health work is beyond reproach.

BRUTALITY AND ALCOHOL.

THE brutality of many of the acts which occupy the time of our coroners and our law courts is becoming serious. It is quite a special feature of the time. We are spending ten or eleven millions a year over popular education, yet every day's newspaper reports some deed which is simply brutal in its coarseness and its causelessness. It does not represent anything deeply malicious in the criminal, but in its vulgarity and brutality it is exceptional and discreditable. Opinion is divided as to the exact explanation of such a state of things at the end of a century unprecedented for its strides in knowledge, in science, and in civilisation. It defies law and the ordinary penalties of law. Politicians, moralists, and sociologists are apparently helpless to control it. Perhaps the two most revolting instances of late have been firstly that of William Carey, aged thirty-two years, who was taken to Guy's Hospital, where he died on Sept. 24th from a fractured skull. The deceased was knocked down during a fight outside the Swan public-house, Old Kent-road, on the morning of Sept. 23rd, and when he fell his head struck the tram lines. According to the *Times* report of the inquest Walter Wood, a labourer, said that he had been drinking with deceased, and they had about twenty half-pints of ale each. After leaving the Swan Carey and some men began quarrelling, with the result of Carey's death. The other instance is in the murder of the young policeman, James Baldwin, by stabs with a knife. John Ryan has been committed for trial for the murder. We offer no opinion as to his guilt; but according to the evidence of Constable Henry Bendall he was the worse for drink and "the crowd were mostly drunken." They gathered round and the police were pelted with pots and cans. The invariable element in all such brutal acts is alcohol. It is sincerely to be hoped that the Royal Commission on Licensing Laws now in existence will take some evidence on the association of such offences with drinking and with the public-house system as at present conducted. The common British working man may be ignorant and at his wit's end when the day's work is done, but he is not the cruel monster which he appears to be in these midnight scenes as he leaves the public-house, and something must be done to prevent such wholesale demoralisation.

THE ROENTGEN RAYS IN ITALY.[1]

ACCORDING to a review by Dr. Emile Boix in the current number of Duplay's *Archives*, one of the latest additions to the series of manuals which, to the number of over 600, have been issued by the well-known Milanese publisher Ulrico Hoepli with a view to the popularising of science, art, and literature, consists of a volume by Italo Tonta on the nature, history, and practical application of the Roentgen rays. The

[1] Italo Tonta: Raggi di Röntgen e loro pratiche applicazioni. 160 pp., 65 figs., and 14 plates. Milan: Hoepli, 1898.

author, who has studied his subject in several German schools, adds the experience of others to his own observations and advances certain hypotheses which he has formed regarding the nature of the rays and the effects which they produce. He also discusses their mode of action, chemical and luminous, and is able to find a great many points of analogy between them and lightning. Adopting Crookes's theory that all transmissible physical forces are due to vibrations through ether and matter differing from each other solely by reason of the relative rapidity of the vibrations, he likewise agrees with Roentgen that, whereas electricity corresponds to 33,359,730,750 oscillations per second, the x rays should be included in the category which corresponds to about 300,000,000,000 oscillations per second. But Signor Italo Tonta does not adhere exclusively to the dry bones of science, being evidently of opinion with Horace that *omne tulit punctum qui miscuit utile dulci*, for he quotes the following definition of electricity which was written by Galileo Ferrari in an album at the request of a young lady with scientific aspirations: "Ever since Maxwell showed that luminous vibrations may consist in periodic variations of the electro-magnetic forces and his theory was given an experimental basis by Hertz, who adduced facts to prove that electro-magnetic oscillations propagate themselves as light does, the idea has gone on growing ever firmer and firmer that the luminous ether and the medium where electro-magnetic forces have their seat are one and the same thing. Wherefore, O! maiden, so intelligent and so amiable, who dost ask What is electricity? am I able to reply to thine inquiry. Electricity is not only the titanic agent which tearing athwart the atmosphere terrifies by the crash of its thunderbolt, but also the vivifying agent which transmits from the sun to the earth by means of light and heat the magic of colour and the breath of life, which communicates to thy heart the pulsing of the external world and conveys to thy soul the enchantment of a look and of a smile."

AMONG the victims of the recent lamentable disaster to the Atlantic liner *Mohegan* off the Manacles was, we regret to say, Mr. John Fallows, L.S.A., L.R.C.S. Edin., of Princess-mansions, S.W. The deceased gentleman was acting as medical attendant to a patient who was taking a voyage to America. He was specially interested in laryngology and reported that section of the late meeting of the British Medical Association for THE LANCET.

MR. RIDER HAGGARD'S new story, which Messrs. Longmans will publish in November, is entitled "Doctor Therne." The story, which is told by the principal actor, Dr. Therne, after the final catastrophe, deals with the results of the conscientious objector clause in the Vaccination Act, under which the safety of many thousand children and, through them, of the community, is practically left in the hands of the anti-vaccinationists.

AT the County of London Sessions a man, name unknown, was sentenced to six months' hard labour for obtaining money by false pretences. The prisoner defrauded several medical men by representing himself in letters to be Dr. Alfred Vigne, who is now practising in Buluwayo.

A FATAL case of bubonic plague is reported from Vienna. The patient was an employé at the general hospital and, it is presumed, infected himself from a plague cultivation in the laboratory.

THE next meeting of the Odontological Society of Great Britain will take place on Nov. 7th, at 8 P.M., when the President, Mr. John Fairbank, will deliver his introductory address, and a paper will be read by Mr. Storer Bennett on Ankylosis of Human Teeth to the Jaws.

WE are informed that the council's nomination for the office of President of the Roentgen Society for the year 1898–99 is Mr. C. W. Mansell Moullin, F.R.C.S. Eng.

PRACTICAL HINTS ON CYCLING FOR COUNTRY PRACTITIONERS.

BY J. B. EMMERSON, M.D. DURH.

AS a cyclist of 30 years' standing, having begun upon a heavy "velocipede," before the advent of the "bone-shaker, I may be allowed a few words on this subject.

To a man nearing fifty years of age who for a quarter of a century has ridden constantly on horseback without becoming "hard" it is a matter of surprise that two years' serious cycling should have produced such a state of health as he never enjoyed before and that he is more active than he was at twenty-five; but so it is. The country practitioner used to have few opportunities for holiday-making, but now he can get right away from his work on a Sunday quite independently of trains and without being missed from his practice. If the inevitable patient appears just as he is starting it only means ten or twenty minutes' delay and not the loss of a train and consequently of the whole day's outing. One may drive for years and never see, for instance, a brace of magpies or any but the most distant glimpse of other interesting birds, but it is a curious fact that these evince little fear of a cyclist, as though they are well aware that he cannot carry a gun. At night-time, too, it is most remarkable to watch the behaviour of hares. They will rush out of the hedge and career madly backwards and forwards in the light of the lamp for about a furlong, and then end their gambol by another rush back into the hedge. Partridges and pheasants in the daytime scarcely pay one the compliment of rising. Another delightful result of this development is the repopulation of the roads. Formerly one might drive for several miles without meeting as many people. Now the roads in fine weather wear quite a holiday aspect from the number of travellers of all sorts, who produce quite a cheerful effect, and the roadway itself is scored by the marks of rubber tyres instead of by those of iron carriage wheels. All this has taken place in a very few years. No one who has not been compelled to drive incessantly for many years can conceive the pleasure and comfort of travelling on a ring of air instead of having to endure the constant grind of the iron tyre.

So much for the pleasures of the pursuit, now for the practical and economical side. Formerly the writer kept three horses and needed a groom all the year round. He now employs two horses but these are out at grass for a large portion of the year and during this time only an errand-boy is necessitated at a few shillings per week. The summer day's work varies from 15 to 25 miles, but this distance is generally extended for the sake of getting a little variety. There is never a feeling of fatigue at night as there generally is after sitting all day in a gig, and on the rare occasions when it is too wet to cycle it is a simple matter to hire a trap at an infinitesimal cost compared with that of retaining a horse and man all the time.

When a message arrives in the evening, instead of the annoyance at having to turn out with a horse and man it only suggests a pleasant spin after dinner before sitting down to a smoke. Of course, one does not forget the pleasures of the saddle, but those are emphatically only for the winter months when the ground is soft and the capricious movements of the horse will not throw one into an uncomfortable perspiration. No reasonable amount of work hurts a well-fed horse when the roads are soft, but it is pounding along on the hard roads in the summer that knocks him to pieces, so that under this system he ought to last at least three times as long as he would under the old treatment.

There are many things in cycling which are only learnt after a long experience, unless attention is specially called to them. For instance, it is the best plan to keep two bicycles, the old one for use when there is a chance of wet or when something has happened to the better one. What

can be worse than to come down in the night in answer to an urgent message and to find the tyre deflated? The happy possessor of two machines simply rides off on the other and repairs next day at his convenience.

To the cyclist the dissipated or negligent groom offers no terrors. He can go two miles and back in less time than the most active and willing of grooms could be fetched and a horse put in the trap, and there is no such thing as a forgotten whip or a rein not passed through the terets.

It is a good plan to have a nice roomy cycle-room instead of pushing the machines away into the coachhouse or the coalhouse, and many an agreeable half-hour can then be spent in touching-up and altering the position of the saddle or varying the arrangements generally. It is better always to stand the machine on the floor leaning against a wall, for if there is a tiny puncture the weight causes the air to ooze out and the condition of the tube declares itself in the morning. Otherwise if the cycle has been on a stand all night one may ride away for a mile or two without detecting the mischief. The first time that the tyre is removed it is well to write the owner's name and address upon the inside of it. This offers an unsuspected means of identification when it is stolen and the thief, after altering its external appearance, vows that he has been riding it for the last six months.

After enduring the discomfort of the perineal pressure produced by the ordinary type of saddle for some time the rider probably changes to another saddle—say, a Christy—and he is delighted with the firm seat and the absence of obtrusiveness in the peak, together with the cooling effect of the air-channel up the centre. After a time, however, he realises that the spring is too tough and that the stuffing has settled hard. The bolt and nut fixing the spring underneath the peak should be removed and replaced by a lashing of whipcord. This allows a much greater amount of play in the spring. A tuft of horsehair should be tied upon the saddle and a Jaeger pad, costing 2*s*., should be placed over this. The result is an ideal saddle. It is well to bind the pad with some broad elastic, so as to grip the saddle firmly.

All tiny tool-bags on the handle-bars and rattling pumps on the diagonal should be banished. There should be only one receptacle for all appurtenances which you need to carry and the best form is in the shape of a schoolboy's satchel strapped behind the saddle. It should contain a repairing outfit and a short pump for emergencies, with a wrench, a box of matches, and a light alpaca overcoat which will roll up into a small ball and is excellent for turning a cold wind or a shower, and, finally, a small "rubber" or openwork towel with a spare handkerchief. The alpaca coat is much preferable to an indiarubber mackintosh, which produces untold misery from retained perspiration and is a fruitful cause of chills, and a regular wetting while moving is safer than this form of vapour-bath.

All the pumping should be done in the cycle-room with a long pump before starting, and then the short-pump mentioned above is all one needs for a sudden requirement. A toy looking-glass of a couple of inches diameter in the pocket is very useful. Holding this up in front the rider can easily survey the whole road behind him, and when followed by his wife or other tutelary deity he can see that all is well with her.

It is a mistake which every rider may have to regret to coast down very steep hills. It is much better to keep the feet on the pedals and to apply the brake lightly. With a well-made brake it is surprising how little harm is done to a good tyre, which ought to stand this treatment for a couple of years, and after all it costs only 30*s*. to replace it when worn out. Besides it is the back tyre which really endures all the hard work. On the other hand, one should take advantage of every slight declivity to put the feet on the rest. It is wonderful how slight a fall in the road will take the machine along at a fair pace, almost as fast as though the legs were trundling round, and the more backward position along with the short resting time is quite a pleasant change.

Flies and dust are often a cause of great annoyance. If a cheap pince-nez be procured and the glasses broken out the openings can then be covered with black crape. This makes the best screen from the glare of the sun and is most cool and comfortable to wear, as the air rushes through and a gale will not blow it off.

The best shirt to wear is one of white flannel, along with linen collar and cuffs and a bright tie. With the bright tie a little of the flannel which peeps out above a high waistcoat or a Norfolk jacket is not to be detected as not being linen. A full cravat generates too much warmth and suggests the absence of the linen shirt. Of all clothing there is none so comfortable as the "natural wool," which is porous and of a neat, pleasant colour. It should be lined with cashmere and not with cotton or linen. Two suits should be in daily wear so as to change during the day. It is a great luxury and entails very little trouble.

No one now objects to seeing a business man wearing knickers and stockings in the country, but if trousers are preferred they should be turned up neatly twice at the bottom. Clips look bad and they prevent the circulation of the air just where it is most desirable. The piece of box-cloth with the stockings folded thickly over it may be very well for shooting or other walking pursuits, but it forms a most unpleasant hot compress for cycling. It is better to have the stockings drawn up inside the knickers in the plainer and quieter fashion.

For the machine very little oil should be used at once, but it should be frequently applied except to the axles of the wheels which need it very seldom. The chief trouble with any form of lamp is caused not by the quality of the oil but by neglecting frequently to remove the blackened and hardened portion of the wick. In a gale a handkerchief tied bodily over the lamp will still permit a fair amount of light to penetrate it and will prevent the flame from blowing out.

Anywhere where a cup of boiling water can be obtained a good cup of tea can be secured by carrying compressed tea tabloids. When stirred up in the water the infusion is quickly made and all the dust settles promptly to the bottom. Compressed cocoa may be obtained without sugar in sticks like ordinary chocolate. It can be nibbled on the road and is very sustaining. Those who cannot digest milk on ordinary occasions can often do so on a journey. After a good breakfast a rider may go all day by simply stopping here and there at likely farmhouses or elsewhere for a glass of milk. With such a diet there is a constant impression of its being forenoon all through the day, than which nothing produces a greater holiday feeling. There is little desire for smoking after the milk such as there would be after a solid meal, and smoking is injudicious as it relaxes the muscular fibre. Alcohol should be left till the day's work is done and taken only with dinner at night. The "prairie oyster" is easily carried and may be made in something like the following proportions—six eggs, three tablespoonfuls of vinegar, a teaspoonful of salt, and a sprinkling of pepper. This should be whipped up and will go into a half-pint bottle.

The craze for high gears seems to be a great mistake. In this windy climate there are few days on which the cyclist will not have to encounter a head-wind somewhere, and with a gear of 63, he can easily ovecome this and mount any ordinary hill without difficulty. On a long hill it is an absurd waste of power and a trial to the machine to ride up. It is better to dismount and to enjoy the change of exercise in walking up.

In hot weather it is a good plan to take every opportunity of wetting the hair. This has a marked effect in keeping the whole system cool and is a great protection from the sun. Comfortable tweed caps are obtainable for 2*s*. with a cork lining between the peak and the brow where perspiration is apt to be free and disagreeable. For the handles a pair of mittens should be knitted and passed on to the handle-bars. A piece of tape can then be tied round them and the mittens reversed on themselves so as to give a double covering on the handles. This not only moderates vibration but is warm in cold weather and does not become clammy or sticky in warm weather.

The backward position of the saddle seems to be overdone. It is better to have it on the front of the T-piece so as to distribute the weight more fairly between the two wheels. In this way the work is easier and puncture of the hind tube less frequent. In conclusion, originality is not claimed for the majority of these suggestions, but they have all been put to the test of practical experience.

BRISTOL ROYAL INFIRMARY.—The half-yearly meeting of the Bristol Royal Infirmary was held on Sept. 27th. The chairman (Mr. Pellew) stated that the expenditure exceeded the income every year by £3000 and there was at present an adverse balance of £13,000 against the institution. The committee had decided to enlarge the Nurses' Home in Terrell-street. The cost would be about £5000.

THE GUILD OF ST. LUKE.

ON Wednesday, Oct. 19th, the Guild which takes its name from Saint "Luke the beloved physician" and has for its objects "the mutual encouragement and support of its members in leading the purer and higher Christian life and the formation of a bond of union to help them in maintaining a true faith, hope, and love amongst themselves and the members of the medical profession" attended a Festal Evensong at St. Paul's Cathedral. The service was announced for 7.30 P.M., but long before that hour all the available chairs in the sacred edifice were occupied by members of the medical profession, and their friends, except those reserved for the 500 medical men in their gowns and robes and a contingent, numbering 150, of the London companies of the Volunteer Medical Staff Corps. Two silver cornets announced the arrival of this latter part of the congregation, who slowly filed up the aisle preceded by the banner of the Guild and that of St. Mathias. The service commenced with the processional hymn "Christ is made the sure foundation" and the ordinary evensong followed. The sermon was preached by the Bishop of London and the service was conducted by the Rev. C. Kelly. Dr. T. W. Belcher, M.D. Dub., and Canon Newbolt read the lessons, which were taken from Ecclus. xxxviii. and St. Luke xiii.

The Bishop, who took for his text the words from St. Paul's Epistle to the Philippians, ch. iii., v. 21, "Who shall change our vile body that it may be fashioned like unto His glorious body," said that in the Apostle's day as now there were two classes of persons—first, those who though they called themselves Christians minded earthly things, and, secondly, those who accepted a higher order of things than that which was seen. In the Revised Version of the New Testament the text read: "Who shall fashion anew the body of our humiliation that it may be conformed to the body of His glory." The difference between the two versions could be accounted for by the fact that at the time the first translation was made men's moral aspirations did not harmonise with their knowledge. Just in proportion as medical science, anatomy, and biology had revealed the true functions of the body we had got back to that noble view of the body and its place as expressed in St. Paul's words. The Apostle's spiritual insight enabled him to see that the body of our low estate was but a temporary form which was capable of receiving a permanent form. We wanted an ideal. Medical men strove for a perfectly healthy mind in a perfectly healthy body. But unless a man did his own part in the work there could be no real progress in his powers and no real elevation of himself into a higher and better being. In Christ they had the ideal they sought for. Speaking of the resurrection the preacher said he had heard that an eminent biologist had said that if there was a resurrection it must be a resurrection of the body. Body and spirit were so intimately connected that one could not be conceived of as existing in a perfect state without the other. If we thought about the matter we should see that the body would be stamped with the impress of all our thoughts and actions. Man was surrounded by laws which he was continually forgetting and breaking. It was the physician's duty to teach him the law. The Bishop concluded his sermon by pleading for support of the scheme which the Guild was trying to put on foot that the benevolent influences of the medical profession might be carried elsewhere by training up men who would spread the message that our body of humiliation was capable of receiving the marks and conformation of "His glorious body."

HEALTH OF BELFAST.

THE report of the Medical Officer of Health of Belfast, presented to a meeting of the Public Health Committee on Oct. 13th, shows that the death-rate for the week ended Oct. 8th had been from all causes 30·1 and from the principal zymotic diseases 7·9. The total number of deaths registered had been 176, of which 38 were attributed to phthisis and diseases of the respiratory system, 25 to enteric fever, 14 to diarrhœa and dysentery, 4 to diphtheria, 2 to whooping-cough, 1 to scarlet fever. 56 of the deaths registered were those of children under one year of age, and 34 were those of persons over 60 years of age. There were 151 cases of typhoid fever notified during the week, the previous five weeks' notifications having been 114, 247, 276, 271, and 333 respectively, the last and highest figure being that for the week ended August 27th. These statistics show, we are very glad to say, a distinct improvement in the decline of the typhoid fever outbreak, but we hope that the public will not be lulled by them into the belief that the so-called epidemic is a thing of the past. What the Public Health Committee must clearly understand is that until the disease ceases to be endemic in Belfast they will be held accountable, and that to get rid of typhoid fever as a disease which "has come to stay" in that city the Public Health Committee must overhaul the whole sanitary arrangements of the city, including the main drainage system, build a new infectious diseases hospital, and adopt all those sanitary and public health measures which every city of half the size of Belfast in England has done years ago. At a previous meeting a numerous deputation, representing the Association of House and Land Agents, Belfast, waited on the Public Health Committee and proceeded to point out that overcrowding and dirt were in their opinion pronounced enough among the tenants of small house property to cause sickness, and complaining that when drains became stopped or houses insanitary through the carelessness or gratuitous dirtiness of the inmates the owners of the houses were made liable. Frequently drains were blocked up maliciously by the tenants, and the deputation urged that it was most unfair that the owners should be held responsible for insanitary conditions following such acts. What the deputation asked was that the Public Health Committee should coöperate with the agents to induce greater cleanliness and care on the part of the occupants of the houses. They asked that when the sanitary inspectors found that a person kept a dirty house to the public danger they should proceed against him. The chairman pointed out that the agents in such cases had the remedy in their own hands and should apply it by giving the parties notice to leave. The power of the Public Health Committee in regard to occupiers is very limited and in the case of weekly tenants it is simply *nil*. The committee also discussed the question of the horrible houses without back passages, through which filth has to be carried from the midden to the front entrance, and they ultimately decided to take proceedings against the owners of such houses in order to compel them to put in water-closets instead of the existing ashpits. It was suggested that the deputation of the house and land agents previously heard was a counterblast directed against action of this kind on the part of the committee which they have reason to apprehend. We are pleased to be able to report that the Belfast Water Commissioners have, in order to remove any suspicion, decided to promote a Bill for the purpose of obtaining powers to acquire compulsorily so much of the catchment areas of their works as may be requisite to guard more effectually the water-supplies of the city against the possibility of pollution. This proposal applies only to the Woodburn and Stonyford supplies, as provision has already been made for the purchase of all the lands included on the gathering grounds of the gigantic Mourne scheme, from which in two or three years there will be a very abundant supply of capital water for Belfast. This action of the Water Commissioners is all the more praiseworthy and far-seeing, since the present typhoid fever outbreak has never been shown to be due in any way to contaminated water and the report of Professor Frankland as to the water during the past three months is very satisfactory. We are also glad to note that the Public Health Committee were firm with a deputation of women who appeared before them and urged that as they had no other means of livelihood than pig-keeping (though there is not back passage accommodation to their houses) they should continue the practice by which they live. The committee informed them that the pigs must go but that they would be allowed a short time so as to dispose of these precious animals to the best advantage.

A NEW WORKHOUSE INFIRMARY.—At the meeting of the Thornbury (Gloucestershire) Board of Guardians held on Oct. 14th it was decided to erect a new workhouse infirmary. The building is estimated to cost £3675 and will accommodate 28 patients.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Plumstead Sanitary District.—Some friction arose in the district during 1897 with the London School Board in consequence of an effort being made by the medical officer of health to examine the children in one of the board schools, an examination which was confined to an inspection of the face, ears, throat, and hands of each child. The teacher, after allowing the inspection for some time, requested the medical officer of health to desist until she could report the matter to the London School Board. This she did in due course, and as a consequence a letter was sent to the Plumstead Vestry "severely censuring" the medical officer of health for inspecting the children. Unfortunately a medical officer of health possesses no legal power to thus examine the school children at school, and hence it would appear to be the safest course to intimate to the school authorities his desire to conduct such an inspection in the interest of the public health. As Dr. Sidney Davies observes, it is clearly in the interest both of education and of health that such inspections should be made, and a medical officer of health after having thus inspected the children must have a much clearer idea as to the desirability or the reverse of advising his sanitary authority to order the closure of a school.

Bedfordshire County District.—The estimated population of this administrative county at the middle of 1897 was but 169,469; its birth-rate was 25·3, and its death-rate 15·2 per 1000, the infantile mortality being 130 per 1000 births. As regards the control of infectious diseases this county is, as a whole, very much behindhand, in spite of the fact that compulsory notification has been adopted by all the sanitary authorities save that of Leighton Buzzard. There are many districts without any proper isolation accommodation, and only two urban districts have ambulance provision. So, too, with regard to disinfection the arrangements are not such as to inspire confidence. The county council have taken some action as regards sanitary improvement during the year, but their efforts do not appear to have borne much fruit. The county of Bedfordshire is not, in fact, making such advance in sanitary matters as the appointment of a consulting county medical officer of health might have led us to anticipate. Dr. Leonard Wilde gives in his report a summary of the sanitary requirements of each district within the county, and we trust that by next year he will be able to chronicle more progress. The sanitary authorities cannot plead ignorance as to the necessities of their district.

Wandsworth District.—The several medical officers of health congratulate the Board of Works upon the sanitary condition of this district. In spite of the area becoming more thickly populated they are unable to discover in the mortality returns any evidences of the bad effects of the increased density of the people. In referring to the water-supply the medical officers of health report that in November of last year specimens of young horseleeches were found in the tap water drawn from two houses in the district. Investigation of the circumstances was made both by the medical officers of health and by the officials of the Lambeth Water Company but no light could be thrown on the occurrence. It is added that the domestic cisterns from which the water was drawn were quite clean. It is certainly disappointing that the officials of the water company were unable to offer any suggestion as to the means by which the leeches obtained access to the water.

Warwickshire County District.—Dr. Bostock Hill, who, as usual, summarises the annual report of this county (population 336,219), is gratified to notice that there was during 1897 a much larger estimated increase in the population of the rural districts than has been the case for many years previously, the increase being almost as marked in the rural districts as in the urban. As he observes, however, the figures are only estimates and we must wait till the next census to ascertain the real facts. The birth-rate of the administrative county for 1897 was 28·7 per 1000, the rates for urban and rural districts being almost identical. The general death-rate was 15·2 and the zymotic death-rate 2·0 per 1000. Measles caused 109 deaths, as against 41 from scarlet fever and 54 from diphtheria; but in spite of this fact measles is not now notifiable in any district in the county, the borough of Sutton Coldfield having recently abandoned notification of this disease. The Rugby Urban District Council is still recalcitrant in the matter of notification and hence the county figures of notifications are incomplete. No progress seems to have been made during 1897 in the direction of isolation accommodation, but there has been a diminution in the matter of river pollution and improvements have been made here and there in water-supply. Dr. Hill strongly urges the sanitary authorities themselves to undertake public scavenging, and he insists upon the importance of maintaining the soil as free from pollution as possible.

Oldham Urban District.—Mr. Tattersall, in presenting his last and parting report on this district, expresses his regret that the ratepayers threw out the proposed Bill which was to convert the existing excrement disposal system into one for water carriage, and we can well understand how disappointing it must be in these days to find the public still wedded to conservancy methods, more especially having regard to the recent investigations on the growth of enteric fever bacilli in polluted soil. Mr. Tattersall has left to the people of Oldham a memorial of his energy in the shape of a very carefully prepared life-table which will form a valuable standard of reference for future workers in the district. The expectation of life in Oldham is well shown in the form of coloured charts, where it is compared with the figures for Manchester, Brighton, and England and Wales as a whole. Briefly summarised the tables and charts for males show that at birth the expectation of life in Oldham is two years greater than that in Manchester or in Glasgow and seven years less than that in Brighton or in England and Wales. At ten years of age expectation in Oldham is a year more than in Manchester, almost identical with that in Glasgow, and five years less than that in Brighton or in England and Wales. At the age of fifty-five years expectation in Oldham is some six months more than in Manchester, a year less than in Glasgow, and three years less than in Brighton or in England and Wales. As regards females, the relationship of Oldham with the several towns just mentioned is almost identical with that obtaining in the male sex. Considering that the population of Oldham is well paid, well fed, and well housed Mr. Tattersall is surprised that Glasgow compares so favourably with Oldham and that Oldham does not compare more favourably with Manchester. He thinks that the exposed position of the town and the fact that it is built upon clay may account for the excessive mortality amongst the old people. As a standard up to which Oldham is enjoined to work Mr. Tattersall furnishes a column in his tables of the figures for the healthy districts of England and Wales.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6442 births and 4091 deaths were registered during the week ending Oct. 15th. The annual rate of mortality in these towns, which had declined in the five preceding weeks from 24·6 to 20·5 per 1000, further fell last week to 19·0. In London the rate was 18·5 per 1000, while it averaged 19·4 in the thirty-two provincial towns. The lowest rates in these towns were 10·2 in Brighton, 11·7 in Croydon, 13·1 in Portsmouth, and 13·2 in Cardiff; the highest rates were 25·1 in Manchester, 25·6 in Salford, 25·7 in Sunderland, and 28·5 in Norwich. The 4091 deaths included 618 which were referred to the principal zymotic diseases, against 1119 and 774 in the two preceding weeks; of these, 377 resulted from diarrhœa, 74 from diphtheria, 63 from "fever" (principally enteric), 43 from measles, 38 from whooping-cough, 22 from scarlet fever, and 1 from small-pox. No death from any of these diseases occurred last week in Croydon; in the other towns they caused the lowest death-rates in Oldham, Birkenhead, Brighton, and Huddersfield, and the highest rates in Hull, Salford, Sunderland, and Norwich. The greatest mortality from measles occurred in Sunderland and Norwich; from scarlet fever in Derby; from whooping-cough in Halifax; from "fever" in Salford and Sunderland; and from diarrhœa in Manchester, Norwich, Hull, and Sunderland. The 74 deaths from diphtheria included 41 in London, 8 in

Leeds, 3 in West Ham, 3 in Cardiff, 3 in Swansea, 3 in Birmingham, and 3 in Sheffield. One fatal case of small-pox was registered in London, but not one in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday last, Oct. 15th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on the same date was 2728, against 2353, 2459, and 2606 on the three preceding Saturdays; 357 new cases were admitted during the week, against 288, 300, and 358 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 200 and 226 in the two preceding weeks, further rose last week to 263, and were 12 above the corrected average. The causes of 39, or 1·0 per cent., of the deaths in the thirty-three towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Bradford, Leeds, Hull, Newcastle-upon-Tyne, and in sixteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Nottingham, Liverpool, and Huddersfield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·1 and 20·6 per 1000 in the two preceding weeks, further rose to 20·7 during the week ending Oct. 15th, and exceeded by 1·7 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 12·6 in Aberdeen and 18·6 in Dundee, to 22·6 in Glasgow and 28·1 in Greenock. The 625 deaths in these towns included 54 which were referred to diarrhœa, 19 to whooping-cough, 12 to "fever" (principally enteric), 8 to diphtheria, 7 to scarlet fever, and 5 to measles. In all, 105 deaths resulted from these principal zymotic diseases, against 127 and 123 in the two preceding weeks. These 105 deaths were equal to an annual rate of 3·5 per 1000, which was 0·6 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had declined from 110 to 62 in the four preceding weeks, further fell to 54 last week, of which 27 occurred in Glasgow and 14 in Edinburgh. The 19 deaths from whooping-cough corresponded with the number in the preceding week, and included 12 in Glasgow and 4 in Aberdeen. The deaths referred to different forms of "fever," which had been 14 in each of the two preceding weeks, were 12 last week, of which 9 occurred in Glasgow and 2 in Greenock. The 8 fatal cases of diphtheria showed a slight further increase upon recent weekly numbers, and included 3 in Glasgow and 3 in Dundee Of the 7 deaths from scarlet fever 4 were recorded in Glasgow; and 3 of the 5 fatal cases of measles occurred in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 87 and 105 in the two preceding weeks, further rose to 141 last week, and exceeded by 19 the number in the corresponding period of last year. The causes of 40, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the five preceding weeks from 30·7 to 22·1 per 1000, rose again to 24·9 during the week ending Oct. 15th. During the past four weeks the rate of mortality in the city has averaged 24·9 per 1000, the rate during the same period being 19·7 in both London and Edinburgh. The 167 deaths registered in Dublin during the week under notice showed a increase of 12 upon the number in the preceding week, and included 18 which were referred to the principal zymotic diseases, against 38 and 19 in the two preceding weeks; of these, 11 resulted from diarrhœa, 3 from "fever," 2 from scarlet fever, 1 from measles, 1 from whooping-cough, but not one either from diphtheria or small-pox. These 18 deaths were equal to an annual rate of 2·7 per 1000, the zymotic death-rate during the same period being 2·2 in London and 3·9 in Edinburgh. The fatal cases of diarrhœa, which had been 27 and 14 in the two preceding weeks, further declined to 11 last week. The deaths referred to different forms of "fever," which had declined from 6 to 2 in the three preceding weeks, rose again to 3 last week. The mortality from whooping-cough showed a further decline from that recorded in recent weeks, while that from scarlet fever showed an increase. The 167 deaths in Dublin last week included 50 of infants under one year of age, and 38 of persons aged upwards of sixty years; the deaths both of infants and elderly persons slightly exceeded those recorded in the preceding week. Four inquest cases and 2 deaths from violence were registered; and 59, or more than a third, of the deaths occurred in public institutions. The causes of 14, or more than 8 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointment is announced:—Staff Surgeon George H. Foott to the *Howe*, temporary.

ROYAL ARMY MEDICAL CORPS.

Major Wilkinson is directed to proceed to Woolwich for duty, and Captain Heaton proceeds to Gravesend for duty. Lieutenant-Colonel Magill, Coldstream Guards, is granted leave, with permission to go to Turkey and Greece. Captain Wade proceeds from Shorncliffe to Lydd and takes over charge of the Station Hospital and troops. Major Jones proceeds to Deolali to take over medical charge of the Station Hospital.

INDIA AND THE INDIAN MEDICAL SERVICES.

Lieutenant-Colonel Smyth (retired), who has been temporarily re-employed as a Civil Surgeon in Bengal, to act as Civil Surgeon of Darbhanga during the absence, on deputation, of Captain Green, or until further orders. Captain Deare, on return from temporary military duty, to be Deputy Sanitary Commissioner, Northern Bengal Circle, but will continue to act as Civil Surgeon of Midnapore until further orders. Lieutenant-Colonel Young has been appointed Principal Medical Officer, Malakand Field Force.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Lieutenant W. Fletcher is seconded for service on the West Coast of Africa.

VOLUNTEER CORPS.

Artillery: 2nd Durham (Seaham) (Western Division, Royal Artillery): John Charles French to be Surgeon-Lieutenant. 3rd Middlesex: Percival Wood to be Surgeon-Lieutenant. *Royal Engineers* (Volunteers): Submarine Miners: The Fourth Division: James Wilson, to be Surgeon-Lieutenant. *Rifle:* 2nd Volunteer Battalion the Suffolk Regiment: Surgeon-Lieutenant S. J. J. Kirby to be Surgeon-Captain. 2nd Volunteer Battalion the Essex Regiment; Honorary Assistant Surgeon E. P. Gutteridge resigns his commission. 4th (Donside Highland) Volunteer Battalion the Gordon Highlanders: Surgeon-Captain G. B. Currie resigns his commission. 1st Gloucestershire Royal Engineers (Volunteers): Surgeon-Lieutenant-Colonel D. J. Dutton retires under the provisions of Paragraph 111 of the Volunteer Regulations, 1897, with permission to retain his rank and to continue to wear the uniform of his corps on retirement.

VOLUNTEER INFANTRY BRIGADE.

Western Counties: Surgeon-Captain J. M. Harper, 1st Volunteer Battalion the Prince Albert's (Somersetshire Light Infantry), to be Brigade-Surgeon-Lieutenant-Colonel on appointment as Senior Medical Officer to the Brigade.

NATIONAL SOCIETY FOR AID TO THE SICK AND WOUNDED IN WAR.

Lord Wantage, the chairman of the Council of the National Society for Aid to the Sick and Wounded in War (British Red Cross Society), has received from Colonel Young, the society's Commissioner, a telegraphic communication from Cairo in which he states that after conferring with Lord Cromer and the Sirdar as to the best means of showing in a practical form the society's sympathy with all sufferers from wounds or sickness in the recent operations in the Soudan irrespectively of nationality he has placed in the Sirdar's hands the sum of £300 to be applied directly for the benefit of the Egyptian soldiers who have suffered in the campaign and the sum of £200 for the purchase and immediate dispatch to Omdurman, of articles urgently needed for the Dervish wounded, who are being treated by the Egyptian medical staff. Lord

Wantage and the council of the Red Cross Society have given their sanction to this application of the funds. The society's steamer *Mayflower* returned to Assouan on Oct. 3rd to bring down the last of the sick from the front. This voyage terminates the society's work of evacuating the sick and wounded and the society's general operations will probably be wound up by the end of this month. It is very gratifying to the council—and will no doubt be to the public also—to learn that the supplemental aid rendered in the Soudan campaign by the British Red Cross Society has met with a very favourable impression in Egypt and the Soudan and has been most highly appreciated alike by the sick and wounded and the officers of the Royal Army Medical Corps.

THE MEDITERRANEAN SQUADRON.

With reference to a paragraph under the above heading in our issue of Oct. 8th stating that some dissatisfaction had been caused among naval medical officers serving with the Mediterranean fleet at the promulgation of an order that every ship is to have a surgeon on board at all hours of the day, we find that the words "a rigid enforcement of the order that every ship is to have a medical officer always on board would practically make a prisoner of the medical officer where there happened to be only one on board a small ship" are liable to misinterpretation, as under the regulations in force every ship bearing two or more medical officers has always to retain one on board, who ministers to the medical requirements of the smaller ships which bear only one or no medical officer; in the former case (that is, when there is only one medical officer) he can take his leave daily except on the occasions when he assumes the medical guard equally with the officers of other ships.

THE BLANE GOLD MEDAL.

The adjudication of the Blane Gold Medal founded for Medical Officers of the Royal Navy has recently been made by the Presidents of the Royal Colleges of Physicians of London and Surgeons of England and the Director-General of the Medical Department of the Navy, and medals have been awarded to Surgeon Francis H. A. Clayton, R.N., H.M.S. *Thrush*, and Staff-Surgeon Percy W. Bassett-Smith, R.N., H.M.S. *Magdala*.

Correspondence.

"Audi alteram partem."

THE ROYAL MEDICAL BENEVOLENT COLLEGE: AN APPEAL FROM THE CHAIRMAN AND TREASURER.

To the Editors of THE LANCET.

SIRS,—The growth of Epsom College within the last decade has surpassed the most sanguine hopes of those interested in its prosperity, and it has now taken its place among the most successful public schools of the country. The distinctions won by pupils of the College at the Universities and medical schools and the success achieved by them in various walks of life, afford convincing evidence of the excellence of the education given within its walls. The large share of academic honours which has fallen to the foundation scholars is a gratifying proof of the efficiency with which the College fulfils one of the chief purposes of its founder. The steadily increasing progress of the College is, however, in danger of receiving a check from insufficiency of funds. Besides providing a first-class education practically free of cost for fifty sons of medical men and exhibitions for several others the institution gives pensions to fifty aged medical men or the widows of medical men. Moreover, in connexion with the College there are other annuities, some of which are for the aged daughters of medical men, and there are also nine presentations to St. Anne's Schools for their orphan daughters. We who, with our colleagues of the governing body, take a deep interest in the welfare of this most necessary and useful institution, therefore earnestly appeal to every member of the medical profession to contribute to its support. When we state that a sum of more than £6000 is expended each year, barely one half of which is at present contributed by the medical profession, it will be granted that the profession does not do all that might reasonably be expected of it for the maintenence of what may justly be called its most important charity. We are confident that these facts only need to be mentioned to ensure a satisfactory response to our appeal. Proverbially charitable to all mankind, members of the profession are not likely to be indifferent to the necessities of their own brethren.

It may be well here to correct an impression which appears to exist in many quarters that the College is solely a charitable establishment intended for the sons of medical men and giving only a narrow scientific training. The school consists for the most part of paying pupils, and these and the foundationers are on a footing of absolute equality both in the class-rooms and in the playing fields. The education is of the most liberal character and is directed not so much to the preparation of the boys for any particular profession as to the development of their intellectual powers in a way which will enable them when the time comes to apply them readily and successfully to the acquisition of special knowledge of any kind. The soundness of the literary training is shown by the fact that in recent years several classical scholarships have been won at the Universities by Epsom boys.

We wish it, however, to be clearly understood that the funds for which we are appealing will not be applied in aid of those of the scholars who are paying pupils. That large section of the school is self-supporting, and here we would only point out to the profession that the numbers of our scholars have been steadily increasing, that more accommodation has been recently provided, and that by sending their sons to the College they will not only secure them a sound first-class education at a moderate cost, but will indirectly assist in the education and maintenance of those who are less fortunate—namely, the foundation scholars and the pensioners.

Like other great schools of England Epsom has its "foundation," but, unfortunately, instead of being like these older schools secure in the possession of a sufficient endowment Epsom has mainly to depend for the purposes of its foundation on a precarious annual income.

It is for the charitable side of the institution (the foundation scholars and the pensioners) that we appeal to the *esprit de corps* of the medical profession and to the generosity of the public which is under a debt of obligation to that profession. Unless a larger measure of public support can be secured than can be counted upon at present the Council will be compelled to make a considerable reduction in their expenditure for charitable purposes. This course, entailing as it necessarily would much privation on many deserving persons, they are most anxious to avoid. It is not much they ask for. An annual subscription of 1 guinea entitles to the privileges of a governor, but smaller subscriptions or donations will be gratefully received. If each member of the profession would give 10*s.*, or even 5*s.*, a year for a very few years the position of the pensioners and foundation scholars would be placed on a secure financial basis and the Council would be able to improve the school and extend its usefulness still more. We are fully aware that during the last year or two the calls upon every class of the community for contributions to charitable objects of all kinds have been unusually numerous, but we venture to think that it would be difficult to find an institution which, having regard either to the value of the work which it is doing or to the merits of the persons for whom it is done, has stronger claims on the profession and on the public than the Royal Medical Benevolent College, Epsom.

Subscriptions may be sent to our honorary local secretaries; to the bankers, Messrs. Barclay and Co., 19, Fleet-street, E.C.; to Dr. Holman, the treasurer, 26, Gloucester-place, Portman-square, W.; or to the secretary, at the office, 37, Soho-square, W.

We are, Sirs, your faithful servants,
J. FAYRER, Chairman of the Council;
C. HOLMAN, Treasurer;
Oct. 18th, 1898. J. BERNARD LAMB, Secretary.

"THE PRACTICAL APPLICATION OF BACTERIOLOGY TO COMMERCE."

To the Editors of THE LANCET.

SIRS,—My attention has just been called to an important leading article on this subject in THE LANCET of Oct. 1st. In it appreciation is only rightly expressed for the pioneer and admirably organised work carried out by Professor Delépine

for the Manchester sanitary authorities and also for similar work undertaken by Professor Boyce in Liverpool. I might perhaps point out that some other municipal authorities have also entered into similar arrangements, though on a smaller scale, with pathological laboratories in their cities. Thus more than three years ago Dr. Spottiswoode Cameron, of Leeds, induced his Sanitary Committee to arrange with the pathological department in the Yorkshire College for the examination of diphtheria and other material and recently we have added to our staff in the hope of extending this very important branch of work.

So greatly has the need been felt by sanitary authorities for this bacteriological assistance that some other cities and towns have endeavoured to get the work done by some of their staff. I have even heard of analytical chemists taking this subject up and professing to be ready to make bacteriological examinations of water, &c.; but surely the requisite knowledge and skill can only be possessed by those thoroughly conversant with, and, what is more important still, constantly engaged in, such investigations. This is a point which is clearly emphasised in your leading article. The minimum requirements on the part of those who would undertake such work are that they should be engaged in teaching these subjects and should also have time and opportunity for research work. I take it that your observations upon routine and diagnostic laboratory work on the one hand and the opportunities for research work on the other must commend themselves to anyone with the least experience of pathological investigations. The importance of sanitary authorities being in close touch with those engaged in pathological and bacteriological work cannot be exaggerated. As far as the provinces are concerned our medical schools are scattered up and down the country and should form admirable centres for public laboratories. The communication between these centres and surrounding towns is of the easiest so that results obtained can be at once communicated by telephone as it is our custom to do in Leeds itself. I think it would be for many reasons a great misfortune if these centres should lose the bacteriological work which sanitary authorities find to become more and more necessary as time advances. The duties of medical officers of health are so multifarious that they can hardly wish to add to them the superintendence of bacteriological laboratories and therefore they would presumably be glad to depute this work to such central laboratories. Another point which is touched upon in your leading article is that of funds, the bugbear of many scientific institutions in this country. By bringing this bacteriological work into such centres as those referred to above the funds are increased, more assistance can be secured, and greater efficiency attained. In addition to this opportunities are thus afforded for the training of pathologists and bacteriologists of whom this country has none too many.

The munificent generosity displayed by inhabitants of our great provincial cities, such as Liverpool, Manchester, Leeds, in giving large sums of money shows that not only the profession but also the enlightened outside public are beginning fully to appreciate the scientific work done in these laboratories. This subject has been engaging my attention for some little time past and I trust that this may be the excuse for the length of my letter.

I am, Sirs, yours faithfully,

The Medical School, Leeds, Oct. 18th, 1898. E. F. TREVELYAN.

"WHAT IS 'FIRST AID'?"

To the Editors of THE LANCET.

SIRS,—Mr. Samuel Osborn's letter defining "first aid" in THE LANCET of Oct. 15th is, I hope, likely to be of good service. There has been a tendency for many years past for classes to wander beyond the limits of the subject in the attempt to master to some extent at least the subjects of anatomy, physiology, medicine, and surgery, in the five or six lessons usually given in each course—an attempt encouraged, I regret to say, by the questions of some examiners, such as: "What is the function of the spleen? or cerebellum? or which is the femoral artery?" First aid is really a subject in itself and the instruction should be kept absolutely within the limits of the subject, the whole range of which is covered by the knowledge of a few simple principles and the practical application of that knowledge. While the scope of the examination should therefore be very limited the standard required for a certificate should be high. The teaching should be in the simplest language and all technical terms should be avoided. It is not necessary that classes should be instructed in the mechanism of the heart or the physiology of respiration, and surely the artery of the thigh is more expressive to a person without technical knowledge than the "femoral artery," and is much easier to remember.

First aid should be considered as quite separate and distinct from anatomy, physiology, &c., and any attempt to include them even in a rudimentary way in first aid instruction is only likely to cause confusion and inefficiency. Every qualified medical man is considered competent to give instruction in first aid, but as it is not altogether easy to compress the essentials in a few lectures and avoid the introduction of matter which, however interesting and instructive, is not strictly relevant, it would be a good thing if the various bodies chiefly concerned in the subject were to nominate representatives to meet and agree upon a scheme of instruction which would ensure uniformity and secure a standard of practical knowledge which though limited would be thorough.

I am, Sirs, your obedient servant,

VALENTINE MATTHEWS.

Suffolk-street, S.W., Oct. 15th, 1898.

"VITALITY."

To the Editors of THE LANCET.

SIRS,—Allow me to remark that for the present I shall be sufficiently occupied in defending my own views concerning *vital phenomena* and therefore do not propose to criticise the admirable work of Professor Virchow, who—with Kölliker and several other observers, including myself—has been constantly during the last fifty years very actively engaged in microscopical investigation in health and disease.

If Dr. J. H. Rowe looks over "Protoplasm," 1870–92, he will find many critical remarks which may interest him and he may perhaps assist progress by commenting upon objections to many doctrines generally entertained which I have been led to offer. I send him a reprint of my views in recent papers in THE LANCET which, like other work of mine, are based upon repeated microscopical *observations* and actual facts which have nothing whatever to do with *Spiritus* and cannot possibly have any "supernatural tinge of the Paracelsian world."

Let us concentrate our attention upon the questions of the origin, structure, formation, mode of growth, and action of organs and tissues which have to do with man's health and disease and death, and man's place in nature, which can be determined by microscopical investigation only.

I am, Sirs, yours faithfully,

Oct. 17th, 1898. LIONEL S. BEALE.

To the Editors of THE LANCET.

SIRS,—In relation to the controversy now running in your columns concerning "Vitality" I should like to call attention to one property of living matter which has hitherto received little attention and has not as far as I know received a name. I refer to what might be called "molecular inertia" or "molecular self-conservation." This property is indicated by the fact that as long as any tissue is alive it remains unchanged but immediately after death under the same conditions begins to disintegrate. Furthermore, I wish to offer reasons (*pace* Professor Virchow) for believing that this property of living matter may not depend entirely upon the intrinsic constitution of the cell, but in part upon the power of calling into action a force or forces not included in the ordinary physical gamut. We know that matter varies much in the power of calling into play the known physical forces. The magnetic ray passes indifferently through a thick stone wall, but is arrested by, and acts upon, a needle on the other side. In the same way it is easily conceivable that living matter has such a molecular arrangement that it is able to arrest ethereal forces of which we have no sensuous cognisance. The familiar phenomenon of a vibrating plate throwing sand into patterns according to its nodal lines is suggestive. Suppose the plate were made to vibrate by means of a resonating gong; at every beat the sand would be approximated to these lines, but if the plate and gong did not resonate this would not take place. In the same way it is not at all

improbable that the molecules of living matter are so arranged that their vibrations resonate with some ethereal waves not classed amongst known physical forces. If after the sand has been forced into the nodal lines some of it is disturbed it will as the plate vibrates be thrown back into its former place; the stability of the sandy pattern is dependent on the resonance of the plate with the gong; an external force is arrested and used to produce the result. In the same way it is conceivable that if the molecules of living matter are disturbed the force to which their vibrations resonate may throw back the displaced parts and maintain by external means the stability of the living molecule. Again, if new sand be thrown on the plate this will gradually be forced on to the nodal lines and, as it were, be assimilated with what was formerly there. It is instructive to note that an observer situated on the plate whose vision did not reach the gong and who was deaf would be likely to come to the conclusion that the phenomena he observed were quite explainable by the actions of the forces he saw about him and might not guess at the existence of the gong or the striker. It is possible that this principle plays a great part in development; as the ovum throws off new cells, only those able to keep their stability by resonance of their molecular vibrations with the forces playing upon them would survive and so definite types of cells would be produced bearing the impress of external forces. If we push analogy a step further it is only on the lines laid down by the President of the British Association in his reference to transmission of thought. It is conceivable that some part of the brain should form as it were fluorescent points capable of arresting a subtle force disturbance of which results in our conscious ideation and will power.

I am, Sirs, yours faithfully,

London, Oct. 15th, 1898. T. GLOVER LYON.

To the Editors of THE LANCET.

SIRS,—My remarks referring to the augmentation in the sum of vitality and the transmutation of vitality into known forms of physical force were made on the assumption that Dr. Lionel Beale regarded his "vitality" as a species of force. Dr. Beale, however, tells us in his last letter that vitality is not force, and on this assumption those remarks of mine are of course pointless. He says vitality is "without weight and immeasurable" and "cannot be derived from non-living matter or from force." How are we to reconcile this statement with the facts of evolution? Though we may not yet have completely explained the mode of organic evolution no one can doubt that selection plays a part in the process. Now, it is clear that in Dr. Lionel Beale's view organic evolution must essentially be an evolution of vitality—of that spectral something which is supposed to work through structureless bioplasm and to determine structure and development. One must, therefore, suppose that selection operates upon this mysterious agency and not upon material organisms with their multitudinous physical potentialities. Let us see how difficult it is to realise such a conception.

Inasmuch as every living thing has its own peculiar biological tendencies, each must possess its own special vitality. We cannot, therefore, regard vitality as a single entity. We must assume many vitality-entities—one for every living thing. Such an assumption lands us into difficulties. (*a*) Inasmuch as vitality is immaterial—imponderable, unmeasurable, having neither length nor breadth, not derivable from, nor convertible into, physical force—how can we bring it into relation with space—how locate it? (*b*) What sort of changes do these immaterial entities undergo during evolution? Take any individual *homo*, and trace in imagination his evolution from, let us say, his piscian ancestry. His descent must pass through myriads of vitality, entities, each such entity as we travel down the long ancestral line becoming more and more involved, acquiring greater and greater powers in determining structure and function. Can we, I would ask, form any mental picture of such an evolution—any conception whatsoever of the changes undergone by the immaterial agency in its process of evolution? (*c*) How are we to explain the blending of paternal and maternal tendencies? Are we to suppose that the vitality associated with the nucleus of the germ blends with the vitality associated with the nucleus of the sperm, so as to form a new vitality-entity, or that each vitality, the germinal and sperminal, remains separate and distinct throughout development? Either view appears inconceivable. How, on the one hand, can two immaterial agencies blend into one? And, on the other hand, would it be possible to get proper coöperation between two separate and distinct directing powers unless, indeed, we suppose them to have frequent conferences together?

Like Dr. J. H. Rowe I was interested to find Professor Virchow, in his Huxley Lecture, adopting the materialistic theory of vital phenomena. Dr. Rowe asks who is right, the German or the Englishman? I confess that when the question is thus pointedly put my barbaric sense of patriotism makes me almost hope the Englishman is. We owe much to Dr. Lionel Beale, and it may well be that there is more in his theory of vitality than my narrow vision allows me to see. When brought face to face with the mystery of things one does well to recall those fine words of Hamlet—"There are more things in heaven and earth, Horatio, Than are dreamt of in our philosophy."

I am, Sirs, yours faithfully,

Wimpole-street, Oct. 17th, 1898. HARRY CAMPBELL.

To the Editors of THE LANCET.

SIRS,—Dr. Beale appears to define vitality as "a power working in every part of the living world." But a definition of life might be expressed in the same words. Vitality, then, is life. But life is force. What is force? It is a property of matter. What is matter? Matter, having property, is a relative, unreal, dependent existence. But let us assume matter to be a real existence. The existence of matter has been eternal and it could not have existed without its property. As long as matter has existed that property of it which we call vitality, life, or force must have existed or been inherent in it, a suitable environment causing life as we know it to become cognisable by us through certain sensations felt at our nerve-centres as organs of cognition. As matter never had a beginning life as a property of matter never had a beginning. It would be as vain to hope to understand how this property—life—inheres in matter as to expect to understand how gravitation, light, or heat inheres in matter. Any examination of life, as a property of matter, involves an examination of matter. Can man through the medium of his nerve centres conduct an examination of matter? If we say Yes, then an extreme case would be that in which the man with his own nerve centres has to examine his own nerve centres, his nerve centres being both subject and object at the same time, which is absurd. The absurdity results from assuming matter to have real existence. An examination of life as a real existence will result similarly in absurdity. A search for the first cause or origin of life, whilst it may help to widen the domain of relative knowledge, must fail, as it has up to now failed, in its object. An inquiry on these lines, if it be for first cause or origin we are looking, will take us round and round a circle for ever but without finding origin. If vitality be the cause of life, what is the cause of vitality? To tell us that vitality "is a power, &c.," does not add to our knowledge.

I am, Sirs, yours faithfully,

B. O'REGAN, L.R.C.P. & S. Edin.

Hackney-road, Oct. 17th, 1898.

"SPHINCTER STRETCHING IN CONSTIPATION."

To the Editors of THE LANCET.

SIRS,—It is indeed interesting to find that sphincter stretching is a well-known method of treatment as the *rationale* of the procedure is by no means apparent. That a superadded constipation due to anal fissure should be cured in this way is to be expected. Mr. Allingham's explanation of the fact in THE LANCET of Oct. 15th (unfortunately I have not his book on Diseases of the Rectum by me) is obvious but beside the mark. To say that fissure starts constipation is an inversion of the true sequence of events. Unquestionably constipation is the commonest predisposing, and the delivery of a hard mass of fæces the commonest exciting, cause of fissure. The difficulty lies in understanding how the original constipation is overcome.

Regarding children I have rarely been able to satisfy myself absolutely that any anus the sphincter of which I have stretched has been abnormally small. It remains that in many cases one must fall back upon the theory of an

additional benefit brought about through reflex nervous action.

I am, Sirs, yours faithfully,

Oct. 16th, 1898. SIDNEY VINES.

"ULCERATING GRANULOMA OF THE PUDENDA."

To the Editors of THE LANCET.

SIRS,—I am glad that Lieutenant-Colonel J. Maitland has drawn attention in THE LANCET of Oct. 15th to the close resemblance existing between the disease described by him as "chronic venereal sores" (*Indian Medical Gazette*, May, 1898) and the condition reported on by me as "ulcerating granuloma of the pudenda" (*British Journal of Dermatology*, April, 1887) and described by Messrs. Conyers and Daniels in the *British Guiana Medical Annual* (1896) as "the lupoid form of the so-called 'groin ulceration' of this colony." This disease seems to have similar features both in the East and West Indies. It is noteworthy, however, that Lieutenant-Colonel Maitland insists on the existence of a primary sore in his cases. With Lieutenant-Colonel Maitland's material histological and bacteriological examinations could be readily conducted (if necessary in this country) and might do much to elucidate the etiology of this curious malady.

I am, Sirs, yours faithfully,

Harley-street, W., Oct. 18th, 1898. JAMES GALLOWAY.

"THE 'SATURDAY REVIEW' AND MEDICAL STUDENTS."

To the Editors of THE LANCET.

SIRS,—*Apropos* of the reference in THE LANCET of Oct. 15th to the *Saturday Review* article regarding medical students as a class I can only say that the writer thereof must be as much lacking in knowledge of his "subjects" as in courtesy to a class of young men who, I venture to assert, are "second to none" in both behaviour and the ease with which they are managed if treated properly. I have had ten years' experience and can safely say that I have never met with aught but courtesy and consideration, though the students here are numbered in hundreds. Animal spirits will always be in existence where youth and health are, and who would stifle them when no harm results? The whole secret of the bad name attached to the medical student is to be found in the fact that every young man who finds himself at Marlborough-street after a riotous night, when asked what he is, says "a medical student," though he may never have seen the inside of a hospital.

I am, Sirs, yours faithfully,

FREDERIC H. MADDEN,
Secretary, St. Mary's Hospital Medical School, Paddington, W.

Oct. 17th, 1898.

DR. SAUNDBY'S ADDRESS.

To the Editors of THE LANCET.

SIRS,—In a very interesting and instructive address delivered to the students of the University College, Cardiff, Dr. Robert Saundby, in speaking of the prospects of the medical profession, made use of the following language: "Time will bring the roses to all of you but not to all fame or wealth. But if I cannot promise that you will all become medical baronets or even medical knights I can assure you that there is no profession in which success more certainly attends attention to business or which so good an income can be so readily secured. ..... The clamour for better pay and greater privileges depends in part upon inability to recognise the true position which we hold in society. That position depends mainly upon the public belief that we are a disinterested profession and that belief rests upon the vast amount of public work we do for nothing. But if we follow the advice of some of our friends and seek to put the marked price upon all our services must we not reckon upon a change on the part of the public which may not be to our advantage?" From the point of view of a gentleman who holds such lofty positions as Dr. Saundby does the opinions expressed in the foregoing sentences are no doubt right and proper. But from the point of view of an ordinary general practitioner the sentiments expressed sound simply ridiculous. It is not to be denied that with the competition of specialists, hospitals, quacks, nurses, and midwives an ordinary medical man (even with a strict attention to business) has the greatest possible difficulty in obtaining a bare livelihood. The profession has been exploited far too long by the public and naturally enough the public has taken advantage of the circumstance. It is very grand no doubt for a professor of medicine to talk in this way, but really, Sirs, the time has gone by for the promulgation of such views. Men enter the medical profession to make a decent living in an honourable way, and if after many years of hard toil they do not succeed in making a competency it will be small comfort to be told by learned professors that the failure has been due to the fact that they are bound to consider themselves a disinterested profession, and that it was their duty to do a vast amount of work for the public free, gratis, and for nothing!

I am, Sirs, faithfully,

Oct. 13th, 1898. A GENERAL PRACTITIONER.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Water-Supply.

SOME anxiety is felt by the authorities about the water-supply of the town, and warning has been issued with regard to the prevention of waste. The increase in the population of the water district during the last four years has amounted to 15,000 a year, an aggregate of 60,000. The long-continued drought has considerably affected the storage supply and has led to careful calculations as to the result, which is considered as serious. The population receiving the supply is estimated at 715,000 and the average consumption during the last year was 23·17 gallons per head per day. The actual amount distributed is about 19½ million gallons per day, or 27 gallons per head. The great storage reservoir at Shustoke has a capacity of 400,000,000 gallons derived from the river Bourne, which is appreciably affected by the prolonged dry weather of the past few months. About 6½ million gallons are daily taken from deep wells which so far have responded admirably to the demand made on them. Still, the level of the great reservoir has been lowering to the extent of 2 in. a day, a fact which is significant of precaution. Some four years have yet to elapse before the Welsh water-supply becomes an accomplished reality, and until then unless strict economy is practised and the natural rainfall is increased the prospect is by no means devoid of anxiety.

Hospital Sunday.

The collection on Oct. 30th for the present year is to go to the General Hospital. A strong appeal has been issued by the committee of the periodical collections and attention is invited earnestly to the following facts. 1. The General Hospital was opened as far back as the year 1779, and is therefore the oldest charity in the city. During this period it has treated 2,000,000 cases. 2. In the last three years 172,148 patients have been relieved, and of these 13,120 were in-patients. 3. During the same period upwards of 122,000 patients were treated as accidents or urgencies without ticket or payment of any kind, and therefore the hospital may to a very great extent be regarded as a free hospital. 4. These figures show a very large increase on all previous years and in themselves present a cogent argument in favour of a much larger measure of support. 5. The annual income from subscriptions, investments, &c., is about £10,000, while the annual expenditure is £22,000 leaving £12,000 a year to be raised by donations, grants, congregational collections, &c. 6. Since the last appeal for the General Hospital was made the old building has been superseded by a new one at a cost of over £210,000, equipped and furnished with every modern improvement and convenience. The additional number of beds in the new building will, if fully occupied, entail an increased annual cost of over £5000.

The Dental Hospital.

In an address given to the dental students on Sept. 24th Mr. Neale pointed out the remarkable growth of the hospital. In 1880 they extracted at the hospital without anæsthetics 3142 teeth; there was no record of the number extracted with anæsthetics, but there were 493 fillings. There were in all 4170 operations. In 1887 the number of extractions had grown to 10,275. Coming to 1895 they extracted 4450 teeth without anæsthetics and 7133 with anæsthetics; they had,

too, 6218 fillings. Last year the number had still further increased. No wonder that the hospital is looked upon as a huge tooth-extracting establishment. Since 1880 the number of students had increased from one or two to 22.

Birmingham Medical School.

The outlook for the present session promises to be more favourable than the previous year, the number of entries having increased. The five-year regulations materially affect the supply, the scant numbers being insufficient to meet the abundant amount of work to be found in the various hospitals.

Oct. 18th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

"Pure" Air in Ancoats.

THERE was a crowded audience at the meeting of the Ancoats Healthy Homes Society on Oct. 13th to hear an address on "Pure Air" from Dr. Worswick. He told his audience that it was quite possible for the people in poor and densely populated districts like Ancoats to be quite healthy if they were not troubled with the dense and poisonous fumes of chemical works. It may be possible, but it requires more intelligent efforts than the dwellers in such districts usually put forth. The districts of Ancoats, Miles Platting, and New Cross are favoured seats of chemical manufacturers, whose presence gives a special character to the climate. The chairman spoke in condemnation of the action of the nine members of the City Council returned for these localities, and said he had been assured that if they took up the matter in earnest something would be done to lessen the evils from which they suffered. A comprehensive resolution was carried which affirmed that the disgraceful condition of the atmosphere in Miles Platting caused by the noxious chemical vapours emanating from the various chemical works in the district demanded the immediate attention of the corporation, and it called upon the representatives of the wards concerned to give more attention to the matter than they had done in the past, and, as the works which manufactured the corporation gas bye-products were (it was said) the biggest offenders by allowing large quantities of sulphuretted hydrogen and other offensive gases to escape and render the district almost unbearable, it called upon the corporation to commence at once to manufacture its own bye-products, believing that such action would not only benefit the ratepayers from a health point of view, but that it would be more economical and better for the working classes. The resolution went on to say that the inclusion of two manufacturers on the Sanitary Committee was viewed with alarm as it was feared that the work of the committee in the matter of offensive trades was in danger of being imitated. The alarm expressed at the presence of chemical manufacturers on the Sanitary Committee is not unnatural because they are chiefly and not very favourably known to these poor people as the producers and disseminators of sickening vapours and vile smells. Perhaps, however, it may not be too much to hope that when the widespread discomfort and injury caused by the diffusion of these products of their scientific ingenuity are brought more definitely and convincingly before them they will turn their undoubted abilities into an entirely new channel and seek to devise means by which their products may be made without at the same time flooding the surrounding districts with evil-smelling and depressing fumes. It undoubtedly behoves the corporation to see to it that while the building by-laws insist on a certain area for back yards and all the other points conducing to wholesome dwellings the air of these yards and dwellings should be fit for respiration.

Moss Side Sewage Farm.

The Moss Side Sewage Farm furnishes an illustration of some of the difficulties met with in the land treatment of sewage. At the meeting of the Urmston District Council on Oct. 11th Mr. G. E. Fryer, the medical officer of health, made a report as to the condition of the Stretford and the Moss Side sewage farms. The former was found "in a highly efficient condition," but the lagoons of the Moss Side farm were offensive and filled with decomposed sewage, and the whole of the tank effluent was being passed on to a small sodden portion of land quite insufficient and incapable of dealing with the sewage. The larger portion of the farm was cultivated for farming purposes. A sample of the final effluent of the farm as turned into the long-suffering Mersey was found to be far worse than the tank effluent. The smell arising from the entire farm was very offensive. The representatives of the Moss Side authorities who were present at the inspection acknowledged but tried to excuse the unsatisfactory state of things and promised an improvement "when their pumps came into operation." At what epoch this may occur is not stated. Moss Side is continuous with Manchester, is mainly residential, and would seem well adapted for the bacterial treatment of its sewage, which is at present a great nuisance to Urmston. No improvement can be expected under the present system "until fresh land is used for filtration and the lagoons cleansed." It is evident that there is still plenty of work close at home before the Mersey and Irwell Joint Committee can restore the former river—to say nothing of the latter—to even a reasonable degree of purity, though it is not much more than a generation ago since salmon and sea-trout were caught in the Mersey about Stretford.

Ancoats Hospital.

At the recent annual meeting of this hospital it was announced that the sons and daughter of the late Mr. James Oliver had undertaken the erection of a new out-patients' department at a cost of nearly £7000 as a memorial of their father and of his work and generosity on behalf of the hospital. It was further stated that a legacy had been received under the will of the late Mr. Thomas Whittaker, chemist, of Ardwick, which would amount to over £3000. Mr. Whittaker was formerly dispenser at Ancoats Hospital and he has left money for the Manchester Royal Infirmary as well as to the hospital with which he was once connected.

Manchester and Liverpool Sewage.

There is the prospect of a very pretty quarrel between the pot and the kettle. At a recent meeting of the Rivers Committee of the Manchester Corporation the question was raised of the proposed attempt on the part of Liverpool to prevent the Manchester Corporation from discharging sludge at the entrance to the Mersey at a point near the north-west lightship, where its discharge was authorised by Admiral Sir George Nares, the conservator of the Mersey. It is really far out at sea, beyond a point where it could affect the City of Liverpool. It is curious that exception should be taken to this when it is stated that "the Liverpool Corporation not only pour their crude sewage into the Mersey close to the landing-stage but also discharge all the solid refuse of the city at the same point at which the sludge is discharged from the Manchester steamer."

Feeble-minded Children.

An address was given by Sir Douglas Galton at Owens College on Oct. 11th, at the opening meeting of the session of the Manchester branch of the British Child Study Association, on "The Educational Management of Feeble-minded Children." He thought it might be assumed that for the future the classification or grading of children according to their intellectual development for purposes of education would be carried on on sounder lines than had been the case hitherto. Excluding the blind and the deaf-and-dumb we had first, he said, the normal bright child, then the dull and backward, the child termed "mentally feeble," and the lower grade of these latter who passed into imbeciles and idiots. He held that individualising the care of the mentally feeble child gave the best hopes of attaining success in its improvement.

Oct. 19th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

New Buildings for the Departments of Anatomy, Medicine, and Surgery, in University College, Liverpool.

ON the occasion of the opening of the Thompson-Yates laboratories in University College on Oct. 8th, Principal Glazebrook made a strong appeal for funds to enable the governors to rebuild the old medical school which has become quite unsuited to the growing needs of the anatomical, medical, and surgical departments. A new dissecting-room is urgently required, as the existing room is fast

becoming obsolete and is altogether inadequate for its purposes. The appeal has already been responded to by Lord Derby, the President of University College, who has promised £5000, and by Mr. Ralph Brocklebank, the chairman of the Royal Infirmary, who has sent a donation of £2000. It is computed that a sum of £20,000 will be required for the new building, and with such a favourable start there ought to be no difficulty in obtaining the requisite amount.

Bequest to a Liverpool Charity.

The late Miss Barbara Morison, formerly of Liverpool and late of Penmaenmawr, has bequeathed £500 to the Liverpool Consumption Hospital.

Stanley Hospital.

The Lord Mayor of Liverpool on Oct. 13th laid the foundation-stone of the new out-patient department of the Stanley Hospital, which is being erected out of the funds of the Roger Lyon-Jones Trust. The new building is to be placed on a site adjoining the hospital and will cost £2500. It will consist of consulting-rooms, dispensary, and other requirements and it will be entirely detached from the hospital pile of buildings. The amount obtained from the Roger Lyon-Jones Trust by the Stanley Hospital within the last few years has reached the substantial sum of £6500, the benefit of which cannot be over-estimated.

Professor Virchow's Visit to the Royal Infirmary.

Professor Virchow paid a visit to the Royal Infirmary on the morning of Oct. 8th. He was received by the medical staff and a number of the officials of the infirmary. Professor Virchow appeared much pleased with his visit and frequently expressed his admiration of the general arrangements of the hospital. He was particularly interested in the post-mortem room, and remarked on the purity of the atmosphere. He was also favourably impressed with the circular wards, which are an interesting feature of the building. The Royal Infirmary, which is quite a recent erection, is one of the finest hospitals in the kingdom, and it contains all the most modern improvements. Professor Virchow was accompanied by Sir Samuel Wilks and Dr. Lauder Brunton. On the following day (Sunday) Lord Lister attended Divine service at the infirmary chapel, and afterwards visited the wards accompanied by his host, Mr. E. R. Bickersteth, who is one of the consulting surgeons to the infirmary.

Oct. 18th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Winter Session in Edinburgh.

EDINBURGH at the beginning of another winter session begins to show that she is recovering from the exhaustion following upon her efforts for the British Medical Association meeting. Many of the men have had a long holiday, but now that classes have reopened they are all at their posts. The session opened on Tuesday, the Oct. 18th. It has been characterised by no special incident beyond the delivery of some class introductory lectures. Some changes have, however, occurred. Dr. James Carmichael's term of office as a physician to the Royal Hospital for Sick Children has terminated and it is expected that one of the extra physicians will be promoted to the vacancy resulting therefrom. This will make a vacancy amongst the extra physicians and for this post Dr. Crawfurd Dunlop, Dr. G. Elder, and Dr. Fowler are candidates. Dr. Muir's appointment to the Professorship of Pathology at Dundee has made a vacancy in the pathological department of the Royal Infirmary, for which there are three candidates—Dr. F. D. Boyd, Dr. Shennan, and Dr. Welsh. The infirmary has lost a valuable official in Dr. Muir, and it is much to be regretted that the authorities interested have not yet seen their way so to remunerate the office of senior pathologist to the infirmary as to enable an expert to make it his main if not his sole work.

Aberdeen Royal Infirmary.

At the next meeting of the board of directors Professor Ogston, who has resigned the office of senior surgeon at the hospital, will be appointed as one of the consulting surgeons and the question of the staff appointments caused by Professor Ogston's resignation will be considered.

Aberdeen and District Branch, British Medical Association.

At the annual general meeting of the Aberdeen, Banff, and Kincardine branch of the British Medical Association held in Marischal College, Aberdeen, on Oct. 15th, Professor Ogston gave a demonstration on the Effects of Modern Bullets on the Human Body. Professor Ogston afterwards presided at the business meeting, at which office-bearers were elected for the ensuing year. Dr. J. O. Wilson (Huntly) was elected President and Dr. Farquharson, M.P., as President-elect. The Vice-Presidents are Professor Finlay (University of Aberdeen) and Dr. G. Trail (Strichen). The annual dinner was subsequently held in the Palace Hotel, Aberdeen.

Proposed Public Slaughter-house, Aberdeen.

The members of the flesher trade in Aberdeen have resolved to adopt a hostile attitude as to this scheme.

St. Andrews University as a Medical School.—The Union with Dundee.

St. Andrews University was opened for the session by an address from Principal Donaldson. In the course of his remarks he observed that better days had begun to dawn upon the University. The numbers of students were steadily increasing and the financial resources of the university were augmented. A clear and satisfactory union with Dundee had been come to and now for the first time they had a complete medical school and a complete medical faculty. This was an immense stride in the effort to gain a high place among the universities of Scotland. The movement for union, which had this year reached its final stage, was justified first of all in the benefit which it conferred on the community. No St. Andrews student need now leave his University to finish his studies elsewhere. If he was attached to the place he could continue in it until he entered upon the duties of his professional life. This meant a great reduction in the expenditure required for education and it meant also that in the more retired locality and in the less numerously attended classes of the University he would get greater attention and have greater opportunities of experiment and research.

The late Dr. Francis I. White.

The news of the death of Dr. Francis I. White, which occurred at his residence in Atholl-place on Saturday, was received with general regret by the community of Perth. The deceased, who was born in 1815, had resided in Perth since 1840. He held several public appointments and his invariable kindness of disposition gained for him friends as well as patients. In ecclesiastical matters he was a prominent member of St. Ninian's Cathedral body. In his house and under his auspices the first meeting for promoting the building of the Cathedral was held so far back as 1846.

Oct. 18th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Mercer's Hospital, Dublin.

A LETTER referring to the subject of the corporation grant withheld, so far, from Mercer's Hospital, has appeared in all the morning papers. It emanated from one of the governors—Mr. Theodore Ryland—and contained what he describes as a practical suggestion :—

> Let the Council, in conference or communication with the governing bodies of all the hospitals usually receiving corporation grants, consider some general scheme for promoting the efficiency of these hospitals, and if application to Parliament be necessary insert a short clause in the next Bill introduced into Parliament authorising the hospitals to comply with the terms agreed upon by all parties. Hitherto the supervision of the corporation has been efficiently exercised by their hospitals committee and it may be worth while to consider whether the committee would freely criticise the management of any hospital on the board of which their fellow-councillors represented the Council.

When it is remembered that the corporation of Dublin have through their hospital committee found fault with the management of Mercer's Hospital and, as a remedy for the quarrels and litigation in connexion with it and the medical staff which have been matter of public comment for years, have resolved upon the strong course of refusing their grant except under specified conditions, it seems to all outsiders improbable that they will consent now to reconsider and revive the scheme under which all their grants have hitherto been made to the hospitals of Dublin at the instance of one of

the governors of the institution which has been censured and dealt with in an exceptionally severe way. The *impasse* is therefore likely to continue.

The Housing of the Poor of Dublin.

A public meeting was held on Oct. 17th in the Mansion House in support of the movement for providing houses for the very poor of Dublin. The Right Honourable the Lord Mayor presided and in his opening address alluded to the refusal of the neighbouring townships to join with Dublin in the expense of maintaining the poor of the city. Professor Antony Roche moved:

That in the opinion of this meeting the time has now arrived when it is absolutely imperative that provision shall be made for the housing of the very poor at rents not exceeding 2*s.* a week.

The Royal Academy of Medicine in Ireland.

The annual general meeting of the Royal Academy of Medicine will be held at the Royal College of Surgeons on Friday, Oct. 28th, at 4.30 P.M., when the report will be submitted and the election of officers will take place.

The Londonderry Asylum.

At a meeting of the governors of this asylum held on Oct. 13th a report was read from a sub-committee of the board as to what would be required for the new asylum buildings at Gransha to relieve the congestion in the asylum by taking over 60 patients. These buildings are situated four miles from the present asylum, on the site of the new asylum to be built for the county at a cost of £110,000. The medical superintendent advised, for economic reasons, that the auxiliary be worked as a branch, stores being daily sent out from the present asylum. They would require one head attendant, seven second class attendants, one cook, and an assistant nurse. The matter was deferred until next monthly meeting, as it was thought wiser to have a full attendance before deciding on a course which would entail such an amount of additional expense.

Infantile Mortality in Belfast.

At an inquest held on Oct. 10th in reference to the death of a child, six weeks old, whose mother had to work in a mill, the jury returned a verdict of "Death from blood-poisoning resulting from improper feeding." The coroner said that in Belfast out of every 100 deaths 25 were those of infants under one year old, and that improper feeding was the cause of one-fourth of those deaths. It is pleasant to say that through the exertions of the Lady Mayoress and Mr. A. W. Vance two crèches have been established and, it is said, the authorities of one of the large spinning mills are shortly to open another.

Opening of the Winter Session, Belfast.

The medical session (1898–99) was opened on Oct. 18th, when Dr. Calwell delivered in the theatre of the Belfast Royal Hospital before a large audience of students and colleagues an extremely interesting and suggestive introductory address on "The Study of Ourselves and our Neighbours," full of original thought and humour and with much practical advice for the guidance of students.

Cork Medical and Surgical Society.

The first meeting for the session of the Cork Medical and Surgical Society was held on Wednesday last and the President, Dr. Edward Magner, delivered the inaugural address. He selected as the subject "University Education in Ireland" and dealt with it mainly as it affects medical interests. He urged the desirability of radical changes which would foster the extension of university teaching. He emphasised the fact that the Royal University is a mere examining board. He protested against centralisation in Dublin as calculated to dwarf national intellectual progress and was strongly in favour of the establishment of universities for the provinces. In favour of the latter project he pointed out that in the German empire there are several universities, many of them located in comparatively small towns, and he also mentioned that in proportion to its population Scotland has a large number of universities. He had no doubt that the great commercial progress of Germany and of Scotland was mainly due to the facilities for university training in those countries. Why should not Ireland have similar opportunities for attaining a high place amongst the commercial nations of the world? In nearly all universities the great majority of the graduates belong to the medical faculty. Hence medical men always did and always will take a deep interest in university extension and development. The political aspect of the Irish university question could not be discussed at a meeting of the Cork Medical and Surgical Society, but as many of the members, either as professors of the Queen's College or as clinical teachers at the hospitals, were intimately associated with medical education they could not fail to be deeply interested in any project calculated to extend the sphere of university training. If the education question were settled once and for all Cork should become a large university centre and the intellectual and material prosperity of the citizens would be assured. Dr. Magner entirely endorsed the opinion of Sir Walter Foster that it would be to the advantage of the profession if its individual members would take a more prominent interest in politics. Medical men might differ amicably in politics and yet work shoulder to shoulder for anything calculated to promote the welfare of the profession at large. Dr. Magner's address is regarded as a valuable contribution to the discussion of the Irish University question and has been fully reported and favourably commented upon by some of the local newspapers.

Oct. 19th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The French Surgical Congress.

THE Twelfth Congress of the French Surgical Association opened on Oct. 17th in the large theatre of the Faculty of Medicine, Professor Le Dentu being in the chair. On the platform were the Dean of the Faculty (Professor Brouardel), Professor Guyon, Professor Bouchard, Professor Poncet of Lyons, the Inspector-General of the Army Medical Staff (M. Dujardin Beaunetz), Professor Jonnesco of Bucharest, Professor Offa of Würzburg, and a large number of surgeons from Paris, the provinces, and foreign countries. Among the audience were MM. J. and A. Reverdin of Geneva, M. Dellettez-Gallet of Brussels, M. Deguins of Antwerp, MM. Doyen, Albarran, Picque, Galeszowski, Boiully, Teuffier, Berger, Legueu, Forgue of Montpellier, Montprofit of Angers, Calot of Berck, Roux of Lausanne, Suarez de Mendoza of Madrid, Ceci of Pisa, and others. Professor Le Dentu opened the session with an address in which he related the advances made in surgery of late years especially with regard to the treatment of tetanus by intracerebral injection of antitetanus serum. M. Albarran followed and read in his own name and in that of Professor Guyon an important paper upon Nephrostomy. MM. Teuffier and Bazy opened a discussion upon the matter. After the meeting the members of the Congress adjourned to the Hôtel des Sociétés Savantes, where they witnessed the progress of sundry surgical operations reproduced by means of the cinematograph. The exhibition will be repeated on Oct. 21st when a representation of an abdominal section performed by M. Doyen will be given. On the evening of Oct. 17th a *soirée* was given by M. Le Dentu in the galleries of the Champs Elysées which was a great success. On Tuesday, Oct. 18th, the members spent the morning in visiting the various surgical clinics in Paris. M. Doyen performed sundry operations in his private hospital in the Avenue de Jena, among which were an operation for the relief of an intestinal fistula and removal of the uterine adnexa for double suppurative salpingitis. In the afternoon M. Faure read a paper upon the Surgical Treatment of Facial Paralysis by means of Joining the Facial Nerve to the Spinal Accessory. MM. Abadie, Jonnesco, and Temoin, of Bourges, read papers upon Resection of the Cervical Sympathetic. Wednesday morning will be allotted to the Surgery of the Neck and Chest and the Vertebral Column, the speakers being MM. Calot, Forgue, Legueu, and Redard, and also to questions concerning Anæsthesia and Dressings, in which discussions the following will take part: MM. Berges, A. Reverdin, Teuffier, and Ceci. On Wednesday evening the subjects for discussion will be the Stomach, the Intestines, the Liver and the Spleen; speakers, MM. Doyan, Roux of Lausanne, Dellettez-Gallet of Brussels, Le Dentu, Quenu, Bouilly, Duset of Lille, Delageniere of Mans, and others. Thursday morning will be devoted to Gynæcology and on Friday there will be a discussion upon the Surgical Treatment of Goitre.

Attempted Suicide of Dr. Boisleux.

Dr. Boisleux, who some eighteen months ago was condemned to six years' imprisonment in company with Dr. Jarrige on account of a pregnant patient whom he had curetted having died, is serving his time in the prison

at Étampes. He chose confinement in a cell which gives him a remission of half his sentence. This method of punishment, which the average criminal considers far more severe, was really lighter for the prisoner in this case, for by undergoing it he avoided contact with the other prisoners. On the other hand, the French prison regulations allow prisoners who have chosen this form of punishment provisional liberation at the end of half their reduced period of imprisonment if they conduct themselves well. Boisleux accordingly expected to be released at the end of eighteen months, and, when he discovered that he would not be, he became very depressed and tried to commit suicide by opening the veins of his feet and arms by means of a sharp spike of metal broken off his mess tin. A warder, however, arrived in time and Boisleux was removed to the infirmary where he was treated. Eight days afterwards he made a second attempt and he is in a very serious condition.

Treatment of Aortic Aneurysm by Injections of Gelatin.

M. Lancereaux made an important communication to the Academy of Medicine on this method of treatment, which has yielded remarkable results in his hands. The first patient mentioned had an aortic aneurysm which projected anteriorly. Subcutaneous injection of a solution of gelatin in artificial serum was made and the patient got well. Some time previously the blood had escaped from the aneurysm and coagulated just under the skin; the patient's state was very critical, but injections of gelatin promptly brought about coagulation of the extravasated blood. In the second case the patient suffered from aneurysm of the aorta which had not come to the surface. By means of the gelatin injection treatment all the pain disappeared and the dilated superficial veins diminished in volume. M. Lancereaux has treated by this method many aneurysms of the aorta and one subclavian aneurysm with similar success. Two other patients who suffered from aortitis and dilatation presented, however, no amelioration. They died and the post-mortem examination showed that no coagulation had taken place in the dilated portion of the artery. The operative proceeding was as follows. A solution of 2 grammes of gelatin in 100 grammes of saline solution is made and this is injected under the skin of the thigh into the subcutaneous cellular tissues in a dose of 250 c.c. The injection is renewed at varying intervals of time—every two days to fifteen days. As a rule, 10, 15, or 20 injections are quite enough to obtain a complete cure. The communication of these researches gave rise to a long discussion at the Academy, in which M. Huchard, Professor Hayem, and Professor Fournier took part. M. Huchard had employed the method of M. Lancereaux in many cases, one of which was very serious, the pulsation of the aneurysm being very strong. A complete cure was obtained by means of 20 injections and the sole inconvenience attaching to this treatment was that it was very painful. In a patient suffering from phthisis with constant hæmoptysis due to little aneurysms of the kind described by Rosmussen M. Huchard employed the same treatment and succeeded in stopping the hæmoptysis. This, however, did not prevent the patient from dying later from pulmonary tuberculosis. Certain precautions have to be observed in this method of treatment, for a patient, under the care of Boisset, in whom injections had been made on a very small scale lest the blood should coagulate all at once died very suddenly from embolism. The injections must never be made in the neighbourhood of the aneurysmal sac and still less into the aneurysmal sac itself.

Obituary.

Professor Haydenreich, Dean of the Faculty of Medicine at Nancy and Professor of Clinical Surgery, has just died after having pricked his finger at an operation.—Professor Bouchacourt, Professor of Obstetrics of the Faculty at Lyons, has recently died at an advanced age. He was the author of many important works dealing with his particular department of practice.

Oct. 19th.

SWINDON WORKHOUSE HOSPITAL.—At the meeting of the Highworth and Swindon Board of Guardians held on Oct. 12th it was decided that the men's hospital be enlarged so as to accommodate 50 additional beds, to include 2 wards, 1 for special cases and the other for boys, and also that the women's hospital should be enlarged by 2 wards to contain 80 additional beds. The estimated cost of the work is £3000.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Gall-stones.

PROFESSOR KEHR of Halberstadt is well known in connexion with operations on the gall-bladder and has probably performed more operations on this viscus than any other German surgeon. Lately while on a visit to Carlsbad he had an opportunity of discussing the indications for either operative or balneological treatment with the resident medical men of the famous Bohemian watering place, and he has published his conclusions in the *Münchener Medicinische Wochenschrift*. He recommends that every patient without distinction should be sent to Carlsbad first and that operation should only be resorted to when the Carlsbad water has proved useless. According to him no medical man of Carlsbad now believes that the Sprudel water is able to dissolve gall-stones or to bring about their expulsion from the gall-bladder. The undoubted success sometimes obtained by a stay in Carlsbad is due most of all to a judicious diet and to the regulation of the hepatic and portal circulations by the water, whereby the complication of cholecystitis is relieved. The gall-stones themselves remain in the gall-bladder, unless they are of very small size, in which latter case they may be spontaneously evacuated. The complaint thus passes into a latent stage. When this condition is established the patient may feel very well, but fresh attacks often occur and then the calculi may become impacted in the bile-duct, and suppuration, peritonitis, or even carcinoma, may be the sequel. These undesirable effects may, however, be avoided by early operations, which are free from danger if performed before there is impaction of gall-stones or adhesion of the gall-bladder to surrounding structures. With these precautions 160 operations have been performed without a death due to the operation. From a theoretical point of view early operation is indicated in every instance provided the surgeon's object is really to cure the complaint and not merely to be content with relieving the pain. Routine methods must be avoided and the age, the constitution, and the social position of the patient must be considered. For instance, patients over sixty years of age ought not to be operated on unless their lives are in danger; well-to-do persons with slight biliary colic, who are able to obtain proper food, may wait some time. Professor Kehr considers that internal treatment is indicated (1) in cases of acute occlusion of the ductus choledochus without fever; (2) in cholecystitis with or without icterus; (3) when calculi are discharged spontaneously during the attacks of colic, but when no calculi are discharged operation is indicated; and (4) in fcases combined with diabetes or gout or when other affections make the administration of an anæsthetic undesirable. A course of Carlsbad treatment is of great benefit after an operation has been performed. When the calculi are in the ductus choledochus, cholagogues, such as olive-oil, glycerine, and salicylate of soda, may be used; when the calculi are still in the gall-bladder and an operation cannot be performed attempts must be made to relieve the inflammation. The endeavours of the physician to make the calculi pass through the narrow duct into the duodenum are much more dangerous than the removal of the calculi by laparotomy. An operation is indicated in every instance (1) of acute sero-purulent cholecystitis; (2) in adhesion of the gall-bladder to the intestines, the stomach, &c., provided that pain has been felt; (3) in chronic occlusion of the ductus choledochus or cysticus; (4) in originally slight cholelithiasis, where the pains have continued notwithstanding internal treatment; (5) in purulent cholangitis; (6) in perforation of the biliary passages and peritonitis; and (7) in morphinism caused by cholelithiasis, where an operation must be performed previously to the treatment of the morphia habit. It is thus not easy to settle the indications for balneological or surgical treatment and a very exact diagnosis, including a reference to the patient's age, constitution, &c., is necessary before deciding whether the Carlsbad treatment or an operation will best suit the individual case.

A Large Nose made Smaller.

In the *Berliner Klinische Wochenschrift* Dr. Joseph describes a rhinoplastic operation performed by him, not, as is usually the case, for the purpose of restoring a missing or mutilated nose, but in order to reduce the proportions of a preternaturally developed nose. A country gentleman possessed an olfactory organ of such unusual dimensions as

to excite the hilarity of his neighbours, and he was thereby so mortified that he well-nigh became melancholy, and appealed to Dr. Joseph to deliver him from this affliction. The superfluous skin and cartilages were accordingly removed by four incisions, which formed two angles with the vertex in the median line of the nose; then the unduly prominent nasal bones were reduced with the chisel, and finally the bridge of the nose was shortened by excising a wedge-shaped portion of bone. Sutures were then applied, the wound healed by first intention, and the patient is now in high spirits, a comparison of photographs affording ample evidence of the improvement which has been brought about in his appearance. A similar case has been under the care of Professor Robert Weir of New York and is described in the *New York Medical Journal*, 1892, page 452.

The Battle of the Clubs in Rhenish Prussia.

By the trades laws in Germany membership of a sick club is compulsory on every working man earning less than 2000 marks (£100) a year. The sick clubs are under the control of the Government, but are, of course, entitled to manage their affairs themselves provided they do nothing contrary to the laws or regulations. In places with a large working-class population the influence of the clubs and of their committees is very great, as there are clubs consisting of from 40,000 to 50,000 paying members, not including their families. The presidents, secretaries, treasurers, &c., nearly always either actually are, or have been, working men, and they often exercise an authority over the medical men which is far from being satisfactory; often also the appointment of a medical man is decided not by the ability but by the political views of the candidate. Controversies between the club medical officers and the committees are therefore not unfrequent and a variety of proposals have been made with a view to guaranteeing the independence of the medical officers. The so-called "free choice" system, which has been described by me in THE LANCET, has given the best results for the profession, but the great majority of clubs have hitherto declined to adopt it. A serious disagreement broke out lately at Remscheid, in Rhenish Prussia, in connexion with a workmen's sick club, which includes nearly all the working men of the town, the committee having, without any sufficient reason, discharged some of the medical men who had hitherto attended the members. The local practitioners also discovered that the committee intended in course of time to dismiss them all and to bring into the town medical officers of their own, who would not engage in private practice, but would receive good salaries for devoting themselves exclusively to the club members and their families. In this way the old-established medical men would lose the not inconsiderable part of their income which had been derived from the club practice, whilst their successors not having the support of private practice would be entirely dependent on the club. Negotiations having failed the local practitioners, in order to put pressure on the committee and to draw public attention to these facts, took a very decided step. Without previous notice they declined to attend club members, club patients who came for advice were sent away, and requests for visits at the houses of patients were ignored. This action, however, unfortunately proved unsuccessful. The club committee stationed club members in front of the medical men's houses to warn off patients, and in urgent cases these sentries or pickets provided patients with money to consult other practitioners of the neighbourhood not concerned in the dispute. Telegrams were also sent to individuals who had previously sought to be appointed and in twenty-four hours sufficient medical aid was at the disposal of the members. The proceedings in Remscheid caused a sensation in Germany and a Government Commissioner was sent there with instructions to mediate between the parties, but as further negotiations were declined by the club and as the committee had not acted contrary to its by-laws he had to retire without having accomplished his purpose. The medical men who had bravely struggled to uphold the honour of the profession have therefore had the worst of the contest through not markedly considering the overcrowding and the disunion in the profession which enabled their opponents to fill their places. They, however, succeeded in drawing attention to the difficulties of their position, one result being that the press, in discussing the question, is mostly of opinion that the trade laws have made German medical men too dependent on the clubs and that the appointment of club medical officers ought to be under official control and not left to private agreement.

Oct. 13th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Recrudescence of Typhoid Fever.

IN Italy the poor are always with us and, in proportionate degree, infectious maladies. Indeed, the two facts originate in the same cause. The poverty that withholds work and wages from the humble breadwinner prevents communes and municipalities from carrying out the sanitary regulations imposed by Government and so beggary and disease can claim a common parentage. In not a few parts of the kingdom typhoid fever has reappeared in epidemic form so pronounced that the Pelloux administration can no longer shut its eyes to the danger. "Many communes," so runs the authoritative announcement, "are so badly furnished with *acqua potabile* that explosions of typhoid fever are inevitable. The drainage system in these localities is so bad as practically to be non-existent. The drinking water is contaminated accordingly, but besides the 'infiltrazioni micidiali' (deadly infiltrations) thus induced there are other factors that make for typhoid fever with hardly less power. Means of house disinfection are absolutely wanting. Isolation of the fever-stricken is neglected for lack of accommodation. The 'locali di ricovero' (places in which the homeless are sheltered) are themselves insanitary in the last degree. The greater number of the communes" (I am still quoting from official sources) "expected to carry out the provisions of the 'legge sanitaria' declare their inability to act from want of money, and in the same breath appeal for Government aid. The Government on its side pleads 'non possumus' and asserts that it does not dispose of funds to meet the prophylactic wants 'di tutto il regno' (of the whole kingdom)." It points to the melancholy and surely discreditable fact that for prophylactic purposes only 8000 lire italiane (£320) are set apart in the Ministry of the Interior—8000 lire, when the communes are 8263 in number! In these circumstances General Pelloux, as head of the Government and minister of the interior, is devising a "modo meno irrisorio" (a means less ridiculous) of fulfilling its duty to the public in the conservation of health, and to this end receives the energetic support of Dr. Baccelli, who besides being a cabinet minister is also president of the Consiglio di Sanità. *Quod felix faustumque sit!*

The Influence of Flowers on the Human Organism.

The "Bullettino della Reale Società Toscana di Orticultura," a monthly organ of fruit and flower culture published in Florence, has just brought to a close a series of interesting and instructive papers on "L'Influenza dei Fiori sull' Organismo Umano." They are from the highly competent pen of Dr. Ruggero Montelucci and will shortly see the light in an independent publication. The author's conclusions may thus be summarised: 1. That flowers not only constitute one of the best and most delicate medicaments of the excitant order (*medicamenti eccitanti*) which modern therapeutics can boast, but that, for many individuals at least, they have established a claim to be classed with those of restorative or reinvigorating media (*ricostituenti o corroboranti*), which contribute to the opportune, if temporary, rehabilitation of the organism. 2. That flowers have a distinct and potent function as purifiers of the air; that they are true and inexhaustible sources of disinfection, probably more active than the ordinary antiseptic substances; and that they operate with greater effect than may be supposed in counterbalancing the miasmata and the evil exhalations in general which are the inevitable concomitants of nature's evolution. Of special interest are Dr. Montelucci's illustrations, from experiments with flowers, of the law as stated by Dr. Mantovani of the University of Pisa in his recently published "Psicologia Fisiologica"—the law that "every pleasurable impression produces an augmentation in volume of the arm to which Mosso's 'pletismograph' is applied, together with a greater fulness in the arterial pulsations and a greater depth in the inspirations, that is to say, in the thoracic movements by which the air is admitted to the lungs."

Oct. 14th.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having previously passed the necessary examinations and having now attained the age of twenty-five years, have been admitted Fellows of the College:—

Alex. Wathen Nuthall, L.R.C.P. Lond., Mason University College, Queen's and General Hospital, Birmingham, and St. Bartholomew's Hospital; diploma of Membership dated Nov. 14th, 1896.
John Dill Russell, L.R.C.P. Lond., M.D. Lond., University College Hospital; August 4th, 1896.

The following gentlemen, having passed the necessary examinations and having conformed to the by-laws and regulations, have been admitted Members of the College:—

Rustom Pestonjee, L.M. & S. Ceylon, Exams. for L.R.C.P. Lond., of Ceylon Medical College and University College Hospital.
John Burn Wood, M.B., C.M. Edin., Exams. for L.R.C.P. Lond., of Edinburgh University.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated at a meeting of the Examiners on Monday, Oct. 10th:—

Anatomy and Physiology.—Thomas Hutchinson, Mason University College, Birmingham; John Knowles Lund, Mason University College, Birmingham and Owens College, Manchester; William Stonier Gibson, Owens College, Manchester; Charles Monks, L.R.C.S. Irel. (Surgeon-Lieutenant-Colonel, I.M.S.), Ledwich School of Medicine, Dublin; Arthur Llewellyn Baldwin Green, St. Bartholomew's Hospital and Aberdeen University; Benjamin Capon, University College, Liverpool; Joseph Ward, Firth College, Sheffield; Percy Southwell Stokes, Firth College, Sheffield, and Mr. Cooke's School of Anatomy and Physiology; Edward Postle Gwyn Causton, Cambridge University; Eugène Dunbar Townroe, St. George's Hospital; Henry Albert Ehrlich and Charles Burnage Penny, Guy's Hospital; Douglas Wilberforce Smith, Edinburgh University and Guy's Hospital; George Maw, University College, London; Bakhshi Isaac Rahim, King's College, London; Ricardo Cope, St. Bartholomew's Hospital; and Harold Edward Flint, St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology.
Anatomy only.—Roderick McKenzie Skinner, Edinburgh University; George Henry Lionel Wright, University College, Bristol; and James Wodderspoon Bennett, Owens College, Manchester, and Mr. Cooke's School of Anatomy and Physiology.
Physiology only.—John Ellington Jones, University College, Bristol.
16 gentlemen were referred in both subjects and 2 in Physiology only.

Tuesday, Oct. 11th:—

Anatomy and Physiology.—Sylvester de Carteret, Charles Louis Claude Owen, John Arthur West, Ernest Eric Young, Napoleon Leonard, and Harry Hendy Butcher, St. Bartholomew's Hospital; Hugh Frank Bodvel-Roberts, Cambridge University and St. Bartholomew's Hospital; Charles Darby Allen Dowman, St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology; Jasper Lakeman, London Hospital; Charles Henry Allen, London Hospital and Mr. Cooke's School of Anatomy and Physiology; Christopher Tredwell Holford, St. Thomas's Hospital; Lawson Jervis Hughes and William Henry Bowen, Guy's Hospital; William Wellesley Campbell, King's College, London; Henry Francis Bellamy, Charing-cross Hospital; John Evan Skey and Frank Derécourt Martyn, Westminster Hospital; William Walker Browne, Richard Ernest Lloyd, and Andrew Norris Stevens, University College, London.
16 gentlemen were referred in both subjects.

Wednesday, Oct. 12th:—

Anatomy and Physiology.—Charles Dix, Thomas Munn Body, Herbert Harland Raw, Hugh Whitwell, Ernest Walters Price, William Percival Miles, Leslie Miles Morris, and William Gerald Greaves Johnson, St. Bartholomew's Hospital; Frank Morgan, Westminster Hospital; Arthur Reginald Schofield, Robert Cecil Pitt, William MacDowall-MacDowall, and Angelo Nelson Symons, London Hospital; David Morgan Jones, St. Mungo's and Anderson's College, Glasgow, and London Hospital; Thomas Howard Frederick Roberts and William Owen Roberts, Guy's Hospital; Basil Hood, Charing-cross Hospital; Antonio Blanc, King's College, London; Bernard Moore Sampson and William Trengweath Harris, St. Thomas's Hospital; William James Deacon Inness, St. Mary's Hospital; and Arthur Watson Levy, Cambridge University and St. Mary's Hospital.
Anatomy only.—David Thomas Jones, Middlesex Hospital and Mr. Cooke's School of Anatomy and Physiology; Walter George Douglas Miller, Cambridge University and University College, London; and Campbell Tilbury Fox, University College, London.
15 gentlemen were referred in both subjects.

UNIVERSITY OF GLASGOW.—The following have passed the First Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (B., botany; Z., zoology; P., physics; C., chemistry):—

James Richard Sunner Anderson (P.), William Kirkpatrick Anderson (B., P.), Thomas Ballantyne (B., Z., P.), Alexander Grey Banks (B., P.), Andrew Farm Bell (B., P.), Thomas Fraser Bowie (P.), James Campbell Bringan (B., Z., C.), Robert Bruce (B.), Robert Harold Campbell (B., P.), Daniel Lyall Carmichael (C.), Alexander Adam Carruthers (P., C.), Hugh William Crawford (B., Z., P., C.), John Cross (P.), Alexander Dick (B., P.), Hugh M'Millan Donaldson (C.), Andrew Robertson Dow (P., C.), William Dow (B., C.), William Elder (C.), John Ferguson, M.A. (P., C.), Thomas Forsyth (Z., C.), John Ritchie Gilmour (P., C.), William Macmillan Gilmour (B., P.), John Miller Gordon (C.), William Harvey (B., P.), Ronald Dingwall Hodge (B. P.), John Gordon Hume (P.), John Brown Dalzell Hunter (B., P.), Neil M'Coll Hutchison (B., P., C.), Ernest David Jackson (B., Z., P., C.), William Fletcher Kay (B., P., C.), James Thompson Kelly (Z.), Alexander Dingwall Kennedy (B., P., C.), Andrew Miller Kerr (B., P.), Douglas Roberson Kerr (P.), Robert Lauder (B., C.), Robert Laurie (Z., P.), Robert Wright Leckie (B., P.), Archibald Leitch (B., P.), Stanley Everard Lewis (C.), Thomas Walker Love (B., Z., P.), Thomas Lovett (B., Z.), Joseph Paterson Lusk (B., C.), Richard Makins (Z., C.), Robert Harry Manson (P., C.), Harry Sommerville Martyn, M.A. (B., Z., P., C.), William Alexander Milne (B., C.), Alexender John Mitchell (B.), Spencer Mort (B., P.), John Bertram M'Cabe (B., Z.), James Duff M'Culloch (B., P.), Coll Macdonald (C.), Daniel Dougall M'Dougall, M.A. (Z., P., C.), Alexander Armstrong Macfarlane (B., P.), Gregor MacGregor (B., Z.), Alegander Macintyre (B., P.), John Matheson M'Kellar (B., Z.), Ivy M'Kenzie, M.A. (B., Z.), John Chancellor M'Kenzie (B., Z., P.), Thomas M'Laren (P., C.), John M'Lean (C.), Dugald Henry Macphail (B.), James Roy M'Vail (Z.), Andrew Alexander M'Whan (P., C.), James Stuart Nicolson (B., P.), David Penman (Z., C.), Thomas Rankine (B., P., C.), Andrew Reid (B., P.), John Mark Reid (B., P.), Thomas Richmond (B.), David Riddell (B., Z., P., C.), Peter Hamilton Robertson (B., P.), Robert Thin Craig Robertson (B., P.), Charles James Ross (B.), James Russell (B., C.), Lawrence Drew Shaw (B., Z., P., C.), James John Sinclair (P., C.), John Williamson Smith (B., Z., P., C.), Robert Cassels Smith (Z., P.), John Stevenson (P., C.), William David Henderson Stevenson (B.), Arthur William Sutherland (B., C.), Peter Lindsay Sutherland (B., P.), John Allan Thom (P.), John Restell Thomas (B., Z., P., C.), William Wagner Turner (B., P.), John Unsworth (B.), James Walker (B., C.), George Wallace (B., Z.), Hugh Fleming Warwick (B., C.), William Norman West Watson (B., P.), Alexander Brown Watt (Z.), and James Wilson (B., P.). *Women*—Jeanie Auld (B., Z.), Agnes Wallace Cameron (Z.), Jane Campbell (Z.), Ethel Lily Chapman (B., Z.), Ethel Macleod Lochhead (B., Z.), Jane Stark M'Lauchlan (B., Z., P., C.), Ethel Jane Mildred Pryce (B., Z.), Margaret Hossack Smart (Z., C.), Elisabeth Taylor Talbert (Z.), and Janet Gardner Waddell (Z., P.).

The following have passed the second professional examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (A., Anatomy; P., Physiology; M., Materia Medica and Therapeutics):—

Matthew Aikman, M.A. (A., P., M.); John Anderson (P.), George Arthur (M.), Gavin Barbour (P., M.), James Oastler Barclay (M.), Thomas Thomson Bathgate (M.), Alexander Binning (M.), Alexander Birch (P., M.), Harry Egerton Brown (M.), William Herbert Brown (M.), John Douglas Brownlie (M.), George Frederick Buchan (P., M.), Patrick Thomas Cairns (M.), Edward Provan Cathcart (M.), John Thomson Clark (P.M.), Robert Clark (M.), James Craig (P.), Charles Peter Garvie Crichton (P.), Charles Campbell Cuthbert, M.A. (M.), Gregor Hugh Grant Davis (P.), James Dick, M.A. (P., M.), Alexander Doig (A., P.), John Downie (A., P., M.), John Pinkerton Duncan, B.Sc. (M.), George Balfour Eadie (A., P., M.), Leonard Findlay (M.), John Forrest (M.), Alexander Fraser, M.A. (M.), Matthew William Fraser (P., M.), Gilbert Garrey (P., M.), David George Somerville Gartshore (P., M.), James Gemmel (A.), Edward Gillespie (M.), William Girvan (M.), Hyam Goodman, M.A. (A.), Charles Aikman Gourlay, M.A. (A., P., M.), James Dickson Gourlay (A., P.), John Gracie (P.), Charles Herbert Gunson (A., P., M.), George Pillans Harlan (M.), James Macpherson Henry (M.), Charles Milburn Hope (A., P.), Thomas Hamilton Jack (M.), John Kennedy (M.), William Bryce Kerr (M.), Alexander King (A.), James Dickson Laidlaw (A., P.), John Francis Lambie (M.), Alexander Leitch (A., P.), Norman Maclean Leys (P., M.), James Dunlop Lickley (M.), Donald M'Farlane Livingston (M.), John Lockhart (A., P., M.), Alexander Logan (M.), David Dale Logan (A., P.), David Longwill (A., P.), Jacob Mains (M.), Andrew Mair (M.), Robert MacNab Marshall (M.), Allan Martin, M.A. (M.), James Millar, M.A. (A., P., M.), Peter Moir (M.), Alexander Munro (A., P., M.), James William M'Dougall (A., P.), Walter James M'Feat (A., P.), George Steventon M'Kinnon (A., M.), James Mackinnon (M.), Burgess M'Phee (A., P.), James M'Pherson, M.A. (A., P), Duncan Mackenzie MacRae, M.A. (A., P., M.), James Patrick (A., P., M.), Peter Mackenzie Reid (P., M.), John Duncan Richmond (M.), David Russell (M.), David Shannon (P., M.), Andrew Stewart (M.), John Strathearn (A., P., M.), Robert Bryers Thom (P.), James Cameron Turnbull (M.), Albert Ernest Wainwright (M.), William Dinning Walker (A., P.), George White (A., P., M.), George Henry Wildish (P.), Thomas Watson Wilson (M.), William Webster Watt Wilson (A.), Hugh Patrick Wright (P., M.), and John Young (M.). *Women*—Auguste Boyes (A.), Gertrude Jane Campbell (M.), Helen Mary Gordon (P.), Lila Stephenson Greig (M.), Catherine Spence Howden (A., P.), Mary Emma Potter (A., P.), Mary Ann Thompson Ritchings (P.), Agnes Brymner Sinclair (P., M.), Elizabeth Helen Smith (A., P.), and Mabel Talbot (M.).

The following have passed the Third Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subject or subjects indicated (P., Pathology; M., Medical Jurisprudence and Public Health):—

James Freeborn Bennett (M.), Andrew Brownlie (P., M.), Thomas Bullough Calland (P.), James Robert Chalmers (M.), David Maclure Cowan (P., M.), John Craig (P., M.), George Morris Crawford (P., M.), William Crerar (M.), James Austin Dickie (P., M.), James

Drummond (M.), Hugh Campbell Ferguson (M.), George Gardner (P., M.), John Gardner (P., M.), William Gibson (M.), Nicol Jamieson (P., M.), Andrew Kerr (M.), Andrew Love (P., M.), Ramsay Millar (M.), Hugh Miller (M.), Ernest Wardlaw Milne (M.), Ebenezer Mitchell, M.A. (P., M.), James Hogg MacDonald (M.), Peter M'Fadyen (M.), John McGilchrist (M.), Anderson Gray M'Kendrick (P.), Charles Forbes Maclean (M.), George Todd Maclean, M.A. (P., M.), Norman Forbes MacLeod (M.), William Johnson Maclure (P., M.), Thomas Stephens Picken (P., M.), Robert Rennie (P., M.), William Alexander Riddell (M.), Arthur Robin (M.), David Ap Simon (M.), David James Smith (M.), John Steele Smith (P., M.), William Stewart Stalker (P., M.), Peter Alexander Steven (M.), Alfred George Stewart (M.), Frederic Richardson Stewart, M.A. (P., M.), Charles Pinkerton Thomson (M.), William Brown Thomson (M.), Thomas Bird Tierney (P. M.), Alexander Laurie Watson, M.A. (M.), Alexander Simpson Wells, M.A. (M.), Robert Orr Whyte, M.A. (M.), Alexander Wilson (P.), and William Wright (M.) *Women*—Sarah Davidson (P. M.), Maud Spencer (P., M.), and Edythe Marjorie Stewart Walker (P., M.).

Mr. Stewart Dunbar has passed the Third Professional Examination (regional anatomy and materia medica and pharmacy) for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.).

ROYAL UNIVERSITY OF IRELAND.—The following candidates have passed the examinations for the undermentioned degrees:—

M.B., B.Ch., B.A.O.—Upper Pass: *Edwin J. Butler, Queen's College, Cork; *Patrick Canning (M.A.), Catholic University School of Medicine; Theodore F. Dillon, Queen's College, Cork; George C. R. Harbinson and *David M'Cay, Queen's College, Belfast; Edward P. M'Loughlin (B.A.), St. Thomas's Hospital, London, and Catholic University School of Medicine; Arthur B. M'Master and Joseph Martin, Queen's College, Belfast; John Murray, Catholic University School of Medicine; Frederick S. Scott, Queen's College, Galway, and University of Edinburgh; James B. Slattery, Queen's College, Cork, and Catholic University School of Medicine. *Pass:* Robert A. L. Graham, B.A., and Alexander Grahame, Queen's College, Belfast; Joseph J. Hill, Queen's College, Cork; Alexander E. Knight, Queen's College, Belfast; Daniel Mahony, Catholic University School of Medicine; Robert A. Neilson, Queen's College, Galway and Belfast, and School of Medicine, Edinburgh; Henry S. Orr, Daniel S. Robinson, and Robert A. Shaw, Queen's College, Belfast; Lucy E. Smith, Queen's College, Cork; Richard B. Threlfall, Queen's College, Galway, and School of Medicine, Edinburgh; William White, Queen's College, Cork; and James E. Whyte, Queen's College, Belfast.

M.D.—Charles L. Birmingham, M.B., B.Ch., B.A.O., private study; Anna L. Church, M.B., B.Ch., B.A.O., Johns Hopkins Hospital, Baltimore, U.S.A.; and Isaac A. Davidson, B.A., M.B., B.Ch., B.A.O., Queen's College, Belfast.

* Those marked with an asterisk may present themselves for the further examination for honours.

FOREIGN UNIVERSITY INTELLIGENCE.—*Cracow:* Dr. Ludwig Switalski has qualified as *privat-docent* of Midwifery and Gynæcology.—*Gratz:* Dr. Ludwig Mark has qualified as *privat-docent* of Dermatology and Syphiligraphy.—*Lausanne:* Dr. A. Combe, *privat-docent*, has been appointed Extraordinary Professor, and Professor de Cerenville has resigned the charge of the Medical Clinic.—*Madrid:* Dr. Amalio Jimeno, of Cabañas, has been appointed Professor of General Pathology in succession to Dr. Antonio Alonso Cortés, who has resigned the chair.—*Rostock:* A special clinic is being built for ear and throat diseases near the eye clinic. It will contain 11 rooms, including wards and out-patient department, besides an operation-room and a laboratory.—*Vienna:* Dr. A. Ritter von Weismayr has been recognised as *privat-docent* of Internal Medicine; Dr. Heinrich Ludwig as *privat-docent* of Midwifery and Gynæcology; and Dr. Hans Koschier as *privat-docent* of Rhino-Laryngology. The names proposed for the chair of Experimental Pathology, vacated by the death of Dr. Stricker, are (1) Professor von Mering of Halle, (2) Professor Knoll of Prague, (3) Professor Klemensiewicz of Gratz and Professor Löwit of Innsbruck, who obtained an equal number of votes.

THE TECHNICAL EDUCATION OF PLUMBERS.—The winter session of the plumbing classes conducted by the National Registration of Plumbers in conjunction with the Perth School Board was opened on Oct. 8th in the Science Room of the Perth Academy by a lecture by Dr. John S. Lumsden. Mr. James Ramsay, chairman of the Evening Continuation Classes Committee, presided and among those present were ex-Baillie M'Neil, Mr. R. H. Miller (solicitor), Mr. Ellison (technical instructor), and Mr. William Watson. The chairman in his opening remarks said that he saw in this new departure an indication of the progress they were making in their appreciation of the value of science teaching and especially of technical instruction. After Dr. Lumsden had delivered his lecture Mr. William Watson, in the course of a few observations, said that the practical classes had for four or five years been conducted with splendid results and they now had the advantage of a teacher in the science subjects in the person of Dr. Lumsden. The chairman then presented the certificates gained last session by John Morton and David Welsh in the examination held under the graded syllabus of the Plumbers' Company.

VACCINATION GRANT.—Mr. Horace Lowther of Ventnor has been awarded the grant (sixth time) for efficient vaccination in his district.

DEATH OF MR T. H. MOXON OF YARMOUTH.—Mr. Thomas Henry Moxon, one of the oldest medical practitioners in Great Yarmouth, died at his residence, King-street, on Oct. 8th, after a short illness.

THE WINTER SESSION AT THE SANITARY INSTITUTE.—Sir Douglas Galton delivered the introductory lecture to the twenty-sixth course of lectures and practical demonstrations in sanitary science for sanitary officers and students on Oct. 17th. In the course of his address he said he would like to see sanitation made a branch of elementary education.

LITERARY INTELLIGENCE.—Messrs. Smith, Elder and Co. will publish immediately a work upon "Albuminuria and Bright's Disease," by Dr. Tirard. The author, who assisted the late Sir George Johnson in his more recent publications on kidney disease, has treated the subject from the clinical rather than from the pathological standpoint. The book will be illustrated with 15 original plates, 4 of which, representing retinal changes in kidney disease, will be in colours.

CARDIFF INFIRMARY.—At the meeting of the Cardiff Infirmary Committee held on Oct. 12th a letter was read from Mr. Thomas Webb offering to give about £1000 for the purposes of a new and improved operation theatre in memory of his late wife. The gift was gratefully accepted and it was decided that the chairman should see Mr. Webb upon the matter. It was decided to appoint a gynæcologist. In reference to the financial position of the institution it was mentioned that the overdraft at the bank at present was £2500, and it was agreed that an effort should be made to get increased subscriptions.

UNIVERSITY OF CAMBRIDGE.—The returns from the several colleges show that 127 medical students have entered the University this term.—Dr. D. MacAlister has been appointed to act for the Regius Professor of Physic during his absence in reference to the exercises for the M.B. and M.D. degrees.—Professor Bradbury has been reappointed Assessor to the Regius Professor.—The University of Sydney is to be adopted as an affiliated university for students in arts or in science.—Professor Flinders Petrie has presented to Professor Macalister's museum 19 cases of Egyptian skulls and bones from the excavations at Hierakonopolis. They illustrate the physical anthropology of the earliest races of Egypt.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—At the annual meeting of the Royal College of Physicians of Ireland held on St. Luke's Day the following officers were elected for the ensuing year. President: Dr. John William Moore. Vice-President: Dr. W. J. Smyly. Censors: Dr. W. J. Smyly, Dr. H. C. Drury, Mr. J. Murphy, and Dr. A. K. F. McCutcheon. Additional examiners to take the place of an absent Censor:—Medicine: Mr. W. L. Symes. Medical Jurisprudence and Hygiene: Mr. A. N. Montgomery. Midwifery: Mr. T. H. Wilson. Examiners for the Licence in Midwifery: Mr. Andrew J. Horne and Mr. E. Hastings Tweedy. Additional examiners under the Conjoint Examination Scheme:—Biology: Dr. E. MacDowel Cosgrave. Chemistry and Physics: Dr. H. T. Bewley and Mr. Edwin Lapper. Materia Medica and Pharmacy: Dr. F. J. B. Quinlan and Dr. Ninian Falkiner. Physiology: Dr. J. Mallet Purser. Pathology: Dr. Wallace Beatty. Medicine: Dr. H. C. Tweedy and Mr. E. E. Lennon. Hygiene and Forensic Medicine: Mr. S. T. Gordon. College Examiners for the Conjoint Diploma in Public Health:—Meteorology: Dr. Ninian Falkiner. Hygiene: Dr. F. J. B. Quinlan. Chemistry: Mr. Edwin Lapper. Examiners in Preliminary Education: Mr. William Kennedy, B.A., Sch. T.C.D. Science: Mr. C. Joly, F.T.C.D. Representative on the General Medical Council: Dr. Lombe Atthill. Representatives on the Committee of Management under the Conjoint Examination Scheme: Dr. John Magee Finny, Sir Christopher J. Nixon, and Dr. James Craig.

Treasurer: Dr. Lombe Atthill. Registrar: Dr. James Craig. In the evening the annual banquet of the President and Fellows was held in the College Hall.

KING'S COLLEGE, LONDON.—The following scholarships in the medical school have been awarded. Medical Entrance (Universities) Exhibition: 70 guineas Charles Harrison Barber; and 60 guineas, Herbert S. Flook. Warneford Entrance Scholarships (Arts): £25 a year for two years, Thomas Henry Jones; and £25 a year for two years, John James and Eardly Lancelot Holland (equal). Sambrooke Medical Exhibition (Science): £60, Albert Angelo Myers; and £40, Harold Benjamin Day. Rabbeth Medical Scholarship (Science): £20, Harold Benjamin Day and Albert Angelo Myers (equal). The Clothworkers Science Exhibitions (open to all Faculties of the College); £30 a year for two years, Arthur Wright; and £20 a year for two years, William Marden.

VACCINATION EXEMPTION CERTIFICATES.—At the Llandaff, Glamorganshire, police court on Oct. 10th a man applied for a certificate of exemption under the Vaccination Act. He was about to be sworn when the presiding magistrate (Mr. E. W. David) interposed and said that he refused to adjudicate in future on vaccination cases, for he would not be responsible for the scourge which will inevitably overtake this country if this Act remains in force. Colonel Fisher said he endorsed in the main the remarks of his colleague and the application was not granted.—At the meeting of the Monmouthshire Joint Committee at Newport on Oct. 12th during a discussion upon vaccination exemption certificates Colonel Lyne remarked that the new Vaccination Act was a difficult and even obnoxious Act, but there ought to be uniformity in its administration.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The usual quarterly court of the directors of this society was held on Oct. 12th, Dr. Pollock, Vice-President, being in the chair. Two new members were elected. No deaths of members were reported. Applications for relief were read from 49 widows, 11 orphans, and 6 recipients from the Copeland Fund, and it was resolved that £1197 11*s.* be distributed amongst them at the next court. There were no fresh applications for grants and one orphan had become through age ineligible for further assistance. The audited accounts of the last half-year were read and it was resolved to apply the surplus to giving a Christmas present to the 49 widows, 12 orphans, and 5 recipients from the Copeland Fund—viz., £10 to each widow, £3 to each orphan, and £5 to each of those receiving assistance from the Copeland Fund; in all £551. The expenses of the quarter were £64 1*s.* 6*d.*

FREEMASONRY.—*The Æsculapius Lodge, No. 2410:* The seventh installation meeting of this Lodge was held at the Café Royal, Regent-street, on Oct. 12th. Bro. H. W. Kiallmark, M.R.C.S. Eng., was installed master for the ensuing year by Bro. E. H. Ezard, M.D. Edin. The occasion was an eventful one, as Bro. Kiallmark is also a Grand Officer for the year, having had the collar of G.J.D. conferred upon him by the Grand Master H.R.H. the Prince of Wales. Bro. G. Danford Thomas, M.D. Brux., coroner for Central London, was re-elected treasurer, and Bro. Thomas Dutton, M.D. Durh., secretary. Bro. Eyre, M.D. Durh., was admitted to the third degree, and Bros. Pakes and Eaton to the second degree. There was a large number of visitors present, including Bros. Ralph Gooding, M.D., P.G.D., Clement Godson, M.D. Aberd., P.G.D., Inspector-General Belgrave Ninnis, M.D. St. And., R.N., P.G., Std. Br. The members and visitors afterwards dined together and spent a very enjoyable social evening.

THE LATE MR. COTTLE OF CHELTENHAM.—The death has been announced of Mr. J. T. Cottle, which took place on Oct. 12th at Pulteney-villa, Winchcombstreet, in his eighty-eighth year. The deceased gentleman was one of the oldest—if not the oldest—medical practitioners in Cheltenham, and his long connexion with the town won him universal respect. For some time past he had been in failing health, though he carried his years well. He was one of the oldest Poor-law officers in the country, and in 1848 was appointed a permanent medical officer of the union. In 1867 he was given the office of honorary surgeon to the 10th Rifle Volunteers and retained a similar position in the 2nd Volunteer Battalion Gloucester Regiment to his death. He was one of the promoters of Cheltenham College. He was an ardent sportsman and he kept greyhounds for about thirty years and took a keen interest in the Waterloo Cup competitions, dividing the Champion Stakes at Altcar in 1889. He was twice married; his second wife died a few years since while on the way to the West Indies on the honeymoon. The shock to Mr. Cottle was necessarily severe and it told somewhat on his health.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ALEXANDER, G. P., F.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed a Medical Officer for the Forfar Infirmary.

ALLFREY, FRED. H., B.A. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician to the Royal Free Hospital, Gray's-inn-road.

CABLE, J., L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed a Medical Officer for the Forfar Infirmary.

CHINERY, R. F., L.R.C.P., F.R.C.S. Edin., M.R.C.S., has been re-appointed a Medical Officer for the New Forest Union.

COLLIER, R. S., L.R.C.P. Lond., M.R.C.S., has been appointed a House Surgeon for the North Riding Infirmary, Middlesbrough.

ESKRIGGE, R. B., L.R.C.P. Edin., M.R.C.S., has been appointed a Medical Officer of Health by the Royston Urban District Council.

EYRE, JOHN, M.S., M.D. Durh., has been appointed Honorary Ophthalmic Surgeon to St. Mary's Children's Hospital, Plaistow.

FORSYTH, CHARLES, M.B., Ch.B. Edin., has been appointed Assistant Medical Officer for Wye House Asylum, Buxton.

GEPP, MAURICE, L.R.C.P., L.R.C.S., Edin., L.F.P.S. Glasg., D.P.H., has been re-appointed Medical Officer of Health for the Borough of Shrewsbury.

GOODRICH, EDITH E., M.B., C.M. Glasg., has been appointed Fourth Assistant Medical Officer for the Menston Lunatic Asylum by the West Riding County Council.

JONES, J. E., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed a Medical Officer for the Amlwch Sanitary District of the Anglesey Union.

LEGG, T. PERCY, M.B. Lond., F.R.C.S. Eng., has been appointed Senior Resident Medical Officer to the Royal Free Hospital, Gray's-inn-road.

MACALISTER, J. D. L., M.B., M.S. Edin., has been re-appointed a Medical Officer for the Forfar Infirmary.

MASON, J. J., L.R.C.P., L.R.C.S. Edin., has been appointed a District Medical Officer by the Bollington Urban District Council.

MILNE, J. A., M.B., C.M. Aberd., has been appointed Assistant Medical Officer for the Workhouse by the Leeds Board of Guardians.

MORGAN, WILLIAM, M.R.C.S., L.S.A., has been appointed a Medical Officer for the Swansea Tramway Company.

MULLICK, SARAT K., M.B., C.M. Edin., has been appointed Assistant Physician and Registrar to the National Hospital for Diseases of the Heart and Paralysis, Soho-square, London.

PEGG, JOHN H., B.A. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Casualty House Surgeon to the Royal Free Hospital, Gray's-inn-road.

PETERKIN, GEO., M.B., C.M. Edin., D.P.H., has been re-appointed a Medical Officer for the Forfar Infirmary.

PIERSON, A. C. B., L.R.C.P. Lond., M.R.C.S., has been appointed an Assistant Medical Resident Officer for the new Corporation Hospitals at Menston, Leeds.

WINDLE, J. DAVENPORT, M.B., Ch.B. Vict., M.R.C.S. Eng., has been re-appointed Medical Officer of Health for the Southall Norwood Urban Sanitary District.

WEDDERBURN, A. McL., M.D. Aberd., has been re-appointed a Consulting Physician for the Forfar Infirmary.

WYLDE, J. H., L.R.C.P. Irel., has been appointed a Medical Officer and Public Vaccinator for the Mottram Sanitary District, vice W. E. S. Burnett, resigned.

Vacancies.

For further Information regarding each vacancy reference should be made to the advertisement (see Index).

BATH GENERAL OR ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer, unmarried. Salary £100 per annum with board and apartments in the Hospital.

BIRMINGHAM CITY ASYLUM.—Resident Clinical Assistant. Board and residence provided.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary £150 per annum, with an allowance of £30 per annum for cab hire, and furnished rooms, fire, lights, and attendance.

BOROUGH OF RICHMOND (Surrey) and HESTON AND ISLEWORTH URBAN DISTRICT JOINT ISOLATION HOSPITAL COMMITTEE.—Resident Medical Officer at the new Isolation Hospital at Mogden, near Kneller Hall, Twickenham, unmarried. Salary £100 per annum, with furnished apartments in the Hospital, rations, and washing. Applications to the Clerk to the Joint Committee, 172, High-street, Hounslow, Middlesex.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.

CARDIFF INFIRMARY.—Honorary Gynæcologist.

CARMARTHENSHIRE INFIRMARY.—Resident Medical Officer for twelve months, unmarried. Salary £100 per annum, with furnished apartments, board, attendance, fire, gas, and washing.

CONSEIL SANITAIRE, MARITIME ET QUARANTENAIRE D'EGYPTE.—Medical Post for the Superintendence and Disinfecting Service at Suez and Moses' Wells (Sources de Moïses). Salary commencing at £316 10s. per annum, and a house, will rise progressively to £474 15s. Applications to Dr. M. Armand Ruffer, Alexandria, Egypt.

ECCLES AND PATRICROFT HOSPITAL, Eccles.—Resident House Surgeon for six months. Salary £60 per annum.

GRIMSBY AND DISTRICT HOSPITAL, Great Grimsby.—Resident House Surgeon. Salary £80 per annum, board, lodging, and washing.

HERTFORDSHIRE COUNTY ASYLUM at Hill-end, near St. Albans.—Medical Superintendent. Salary to commence at £500 a year. Certain arrangements as to accommodation until the asylum is completed will be made, and also as to furnished residence, &c., in addition to the salary. Applications to the Clerk to the Hertfordshire County Council, Hertford.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London.—Resident Medical Officer for six months. Salary at the rate of £50 per annum with board, residence, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—House Surgeon for six months. Unmarried. Salary £20, with board and residence in the hospital. Also House Physician for six months. Salary £20, with board and residence in the hospital.

HOSPITAL OF ST. FRANCIS, New Kent-road, London, S.E.—An Assistant Surgeon and an Assistant Physician.

LONDON LOCK HOSPITAL, 91, Dean-street, W.—Surgeon to Out-patients. Applications to the Secretary at Harrow-road, W.

LONDON THROAT HOSPITAL, 204, Great Portland-street.—House Surgeon (non-resident) for six months. Salary at the rate of £25 per annum.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant for one year at least. Salary £120 for first year and £150 afterwards.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and Assistant Resident Medical Officer for six months. Salary at the rate of £50 per annum attaches to the senior post.

OLDHAM INFIRMARY.—Junior House Surgeon. Salary £70 per annum, with board and residence.

ROTHERHAM HOSPITAL AND DISPENSARY.—Resident House Surgeon for three years. Salary £105 per annum, board and washing.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London.—Resident Medical Officer for six months. Salary at the rate of £100 per annum, with furnished apartments, board, and washing.

ROYAL PORTSMOUTH, PORTSEA, AND GOSPORT HOSPITAL, Portsmouth.—Assistant House Surgeon for six months. Board and residence and an honorarium of £15 15s.

ST. PANCRAS AND NORTHERN DISPENSARY, Euston-road, London.—Honorary Physician. Applications to the Hon. Sec., 23, Gordon-street, Gordon-square, W.C.

ST. THOMAS'S HOSPITAL, London.—Assistant Physician.

TORBAY HOSPITAL PROVIDENT DISPENSARY AND EYE INFIRMARY, Torquay.—House Surgeon. Salary £80 and board, lodging, washing, and attendance (wines, spirits, and beer excepted).

UNIVERSITY OF CAMBRIDGE.—The John Lucas Walker Studentship. The studentship, which is of the annual value of at least £200, may be held by a person of either sex and is tenable under certain conditions for three years. Applications to Professor A. A. Kanthack, Pathological Laboratory, Cambridge.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary £150 a year, with furnished apartments, coals, and gas.

Births, Marriages, and Deaths.

BIRTHS.

BAKER.—On Oct. 14th, at Westbourne-grove, W., the wife of William Henry Baker, M.R.C.S., L.R.C.P., of a daughter.

COWPER.—On Oct. 12th, at Havelock, Shanklin, I.W., the wife of John Cowper, M.B., of a son.

FARR.—On Oct. 10th, at St. Helier's, Ealing, W., the wife of Ernest Farr, M.R.C.S., L.S.A., of a daughter.

KIDD.—On Oct. 13th, at Rosslyn-gardens, Hampstead, the wife of Leonard Kidd, M.D., of a daughter.

KOETTLITZ.—On Oct. 16th, at Pencester-road, Dover, the wife of Maurice Koettlitz, L.R.C.P. Lond., of a daughter.

LIPSCOMB.—On Oct. 15th, at Starcross, Devon, the wife of Edgar R. S. Lipscomb, L.R.C.P. Lond., M.R.C.S., L.S.A., of a son.

MARRIAGES.

CATO—SHORT.—On Oct. 18th, at St. John the Evangelist's, Penge, Alexander McLean, M.R.C.S., L.R.C.P., eldest son of William Robert Cato, of Anerley, to Katharine, third daughter of the late Thomas Short, of Carlisle.

CORNER—DRAKE.—On Oct. 18th, at Trinity Church, Walthamstow, Albert Corner, of Forest-gate, M.R.C.S. and L.R.C.P., to Nellie, second daughter of W. J. S. Drake, Forest-gate.

CREAK—CROCKETT.—On Oct. 12th, at St. James's, Kidbrooke, Alexander Brodie Creak, M.R.C.S., L.R.C.P., second son of Captain Creak, R.N., of Blackheath, to Mary Frances, elder daughter of Edwin A. B. Crockett, of Ashley-gardens, S.W.

DEATH.

COTTLE.—On Oct. 12th, at Pulteney Villa, Cheltenham, Thomas James Cottle, M.R.C.S., in his 88th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (9.30 A.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.), London Throat Hospital (2 P.M.).

TUESDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M. and 6 P.M.), Royal Ear Hospital (3 P.M.).

WEDNESDAY (26th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M.).

THURSDAY (27th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.).

FRIDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat Hospital (2 P.M. and 6 P.M.).

SATURDAY (29th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.), London Throat Hospital (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (24th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Sheild: Four Cases of Abdominal Section for Severe Injuries without External Wound.—Dr. F. L. Benham: On the Advantage of Venesection in Acute Pneumonia, with cases in illustration.

TUESDAY (25th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Papers:—Dr. H. L. Lack (communicated by Dr. A. Macfadyen): Fibrinous or Membranous Rhinitis and its Relation to Diphtheria.—Dr. E. Cautley: Congenital Hypertrophic Stenosis of the Pylorus.

WEDNESDAY (26th).—HUNTERIAN SOCIETY (London Institution, Finsbury-circus).—8.30 P.M. Clinical Evening. Cases will be shown by Dr. F. J. Smith, Dr. Chaplin, Dr. J. H. Sequeira, Mr. Tubby, and other Fellows of the Society.

THURSDAY (27th).—NEUROLOGICAL SOCIETY OF LONDON (Medical Society's Rooms, 11, Chandos-street, W.).—8.30 P.M. Dr. Ormerod and Dr. Batten: Idiopathic Muscular Atrophy (Landouzy-Déjerine type) in Mother and Son.—Dr. Beevor: Unilateral Wasting and Paralysis of Lower Half of Trapezius.—Dr. Mott: Arsenical Neuritis from Local Action of the Poison, followed by General Degeneration: Effects upon the Nervous System.—Dr. Ormerod: Case of Hereditary Chorea.—Mr. Lake and Mr. Ballance: Case of Recovery from Tempero-sphenoidal Abscess.—Dr. Beevor and Mr. Ballance: Case of Removal of Subcortical Cerebral Tumour.—Dr. J. Taylor and Mr. Ballance: Case of Trigeminal Neuralgia successfully treated by Krause's Operation.—Dr. Lunn and Mr. Ballance: Case of Removal of Cerebellar Tumour three years and eleven months after the operation.

FRIDAY (28th).—CHARITY ORGANISATION SOCIETY (Portman Rooms, Baker-street, W.).—4.30 P.M. Dr. L. A. Hawkes: The Dispensary. (Course of Lectures on Medical Relief.)

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION (11, Chandos-street, Cavendish-square, W.).—3 P.M. Dr. M. Hunt (President): Inaugural Address. Cases will be shown by Dr. D. Grant, Dr. Milligan, Dr. Lamb, Mr. Lennox Browne, Mr. W. Wingrave, Dr. F. Potter and others.

CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Clinical Evening. The following cases will be shown:—Dr. W. S. Colman: Syringo-myelia.—Mr. J. Clarke: Rachitis Adolescentium.—Dr. N. Dalton: Double Athetosis in a Boy.—Mr. Watson Cheyne: Repair of the Bridge of the Nose by Rabbit Bone.—Dr. S. Phillips: A Case of Chyluria.—Mr. Page: Ankylosis of Lower Jaw treated by Removal of a Wedge from the Neck. And other cases. Patients will be in attendance at 8 P.M.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (24th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. G. Stoker: Chronic Glandular Disease of the Nose and Naso-Pharynx.

TUESDAY (25th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, W.C.).—3.30 P.M. Dr. Ferrier: Hemiplegia.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. P. Abraham: Psoriasis.—Bethlem Hospital, 2 P.M., Dr. Craig: Stupor; Katatonia; Dementia and Senile Insanity.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street, W.).—4 P.M. Dr. T. D. Savill: Cases illustrating the Different Forms of Hysterical Attack, their Pathology and Treatment.

WEDNESDAY (26th).—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: House Drainage.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Habershon: Bronchiectasis.
WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. Bidwell: The Application of Plaster-of-Paris and other Splints.
THURSDAY (27th).—LONDON POST-GRADUATE COURSE.—Central London Sick Asylum Cleveland-st., W., 5.30 P.M., Dr. Mitchell Bruce: Clinical Lecture.
THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Barlow.
CHARING-CROSS HOSPITAL.—4 P.M. Dr. Galloway: Dermatological Demonstration. (Post-Graduate Class.)
THE LONDON SKIN HOSPITAL (40, Fitzroy-square, W.).—4 P.M. Mr. J. Startin: On Gouty Eczema.
FRIDAY (28th).—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Anthrax and Malignant Œdema.
WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Cheatle: The Application of Splints to the Lower Extremity.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

A QUESTION OF ETHICS.

To the Editors of THE LANCET.

SIRS,—The following question has been asked me; perhaps some of your readers will kindly give an answer. X is a growing spa. In it are already settled four medical practitioners. Would it be ethically wrong for another medical man to settle in the place or to go thither three or four days in the week for consultant practice?

I am, Sirs, yours faithfully,
Oct. 18th, 1898. M.D.

WHAT CONSTITUTES A PARTNERSHIP?

To the Editors of THE LANCET.

SIRS,—A and B are in partnership, having equal shares in a practice. Twelve months ago C goes to them as an out-door assistant at a fixed salary. At the expiration of six months A and B offer C a partnership in lieu of the assistantship, C to receive a fifth share of the nett profits in lieu of salary and A and B two-fifths each. C accepts the offer and his name thereupon appears on the surgery door and on the billheads as a member of the firm, besides which A and B repeatedly inform the patients that C is their partner and *not* the assistant. A deed is drawn up by one of the partners, but C and the other partner objecting to the wording of one of the clauses the deed is not signed but remains in the possession of C awaiting rectification. In the meantime, however, C receives his fifth share of the nett receipts which are divided up weekly, A and B receiving their two-fifths each. This goes on for six months when A and B inform C that the practice is too small for three partners and as no deed had been signed C must regard himself as only occupying the position of assistant and as subject to a month's notice. C declines to accept the notice on the ground that his name having appeared on the business premises and on the stationery and having been the recipient for six months of a weekly share of the profits he is a *bond fide* partner, notwithstanding the fact of there being no deed of partnership. Is C right in his contention that the facts as herein stated constitute a partnership? and is he justified in refusing to go out of the firm? The usual assistant's bond which C signed on first going to A and B is still in their possession. Is it still binding on C or should it have been destroyed when C became a partner? If taken into court neither A nor B could state on oath that they had not regarded C as their partner.

I am, Sirs, yours faithfully,
Oct. 19th, 1898. A READER.

*** It seems clear from the above *ex-parte* statement that A and B have made C a partner and have treated him as such. They cannot therefore relegate him to the position of an assistant without his sanction. The bond should have been formally cancelled when C ceased to be an assistant. Only a solicitor with the draft agreement and the bond before him could decide accurately what is C's best legal course. The matter is exactly one for friendly arbitration.—ED. L.

"VULGAR METHODS": AN EXPLANATION.

To the Editors of THE LANCET.

SIRS,—My attention has been directed to THE LANCET of Sept. 24th, in which you print a series of labels. The red labels which you so forcibly impress were evidently disseminated by my locum tenents during my absence from home.

I am, Sirs, yours faithfully,
Plashet-grove, East Ham, Oct. 18th, 1898. HY. HUTCHINSON.

"ADVERTISING."

To the Editors of THE LANCET.

SIRS,—I have received a copy of your journal, dated 15th inst., containing an announcement headed "Advertising" in connexion with my name. That announcement exposes me to an odium that, as I think, I do not in any degree deserve. I was obliged to change my address under very exceptionable and pressing circumstances through no fault of my own, and I did not intentionally send the card in question to anybody to whom I did not believe myself entitled conformably with professional usage to give notice of my removal. In fact, I scrupulously followed the course recommended to me by one who informed me that he had himself followed that course in all its details under similar circumstances on behalf and under the direction of a leading consultant now deceased. Moreover the card sent out for me was copied from the card sent out for that consultant and engraved at the same engraver's. I do not consider that anything I have knowingly done rightly exposes me to any censure that would not be quite as applicable to the eminent consultant above referred to, and he certainly was one whose judgment on a point of professional etiquette could not have been lightly challenged, nor was he by any means singular in his views and conduct in such matters.

I regret, as regards the addressing, &c., of the envelope, that through an oversight any annoyance should have been given to your correspondent.

I am, Sirs, yours faithfully,
Gloucester-place, Portman-square, W. W. BURSLEM ROTHEROE.

INNSBRUCK AS A WINTER RESORT.

MR. W. BUCHANAN, M.R.C.S. Eng., of Chatham, writes to us drawing attention to the claims of Innsbruck as a winter resort. Innsbruck lies at an altitude of 1912 ft. above the sea in a sheltered valley. It is blessed with an abundant supply of pure water brought down from the mountains, a most important item, and owing to the nature of the soil the ground dries very quickly after rain. The weather during November, December, January, and February is dry, still, and cold, with a bright sun, blue sky, and hard dry snow on the ground.

THE PROHIBITION OF CORSETS IN RUSSIAN SCHOOLS.

To the Editors of THE LANCET.

SIRS,—The Russian Minister of Education has forbidden the wearing of stays by the female students under his jurisdiction. Presumably, the reason for this edict is a laudable desire that the Russian educated woman shall rejoice in a natural waist. Regulations dealing with dress, especially with such garments as do not meet the eye, are difficult to enforce and easy to evade; but apart from the difficulty of making such rules effectual it is questionable whether the absolute banishment of every kind of corset would be advantageous. The wasp-waist which has for centuries deformed our female ancestors, though it dies hard, is undoubtedly on its death-bed. Perhaps the case is different in Russia, but among English-speaking women active exercise and games out of doors have become almost universal during the last few years and have necessitated a mode of dress which, while leaving something still to be desired, is on the whole sensible and rational. The corset has shared in the improvements and modifications which are found in every article of attire; there need now be no difficulty in procuring a garment which, without producing any compression or deformity, will nevertheless give to the wearer just the amount of support required by modern dress. The flowing robes of the Greeks needed no such support. But in these days the flowing style would be an inconvenient one to adopt; most women wearing modern dress, excepting the very thin and slight, feel more comfortable in stays of some sort. Many stays are made with shoulder straps and arrangements for attaching the underskirt and stocking suspenders, thus doing away with garters, bands, and strings, and allowing the clothing to be suspended from the shoulders instead of dragging on the hips; such stays have soft

flexible "bones," yielding to every movement of the body and easily withdrawn for laundry purposes. They serve two purposes, supporting the figure and affording a comfortable means of attachment for the other underclothes. Such garments need not be tight; they answer best and are most comfortable when fitting properly and allowing due expansion of the chest and abdomen during breathing. To prohibit their use would be to deprive their wearer of a comfortable and rational garment. The Russian Minister of Education would be only logical were he to forbid men and women alike to wear boots and shoes because certain people have in times past constricted and deformed their feet.

I am, Sirs, yours faithfully,

Clapham-common, S.W., Oct. 17th, 1898. D. CAINE, M.D.

THE POSITION OF THE ASSISTANT WITH REGARD TO FEES EARNED AT CORONERS' INQUESTS.

"A is assistant to B on a salary with a commission on midwifery receipts. He is called in to see a patient and finds him dead on his arrival. Subsequently he makes a post-mortem examination, giving evidence before the coroner. Is he entitled to any part of the fee thus earned in the absence of any agreement to the contrary?"—The gentleman who sends this question to us informs us that A and B feel quite amicably towards each other and does not inform us if he is A or B. The fees belong legally to A, but it is the habit of many principals—and we think a graceful and right habit—to divide such fees with the assistant when all the labour and responsibility has fallen upon the assistant.

"POWDER PUFFING": AN EXPLANATION.

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to an observation in THE LANCET of Oct. 15th in which it is stated that the wrapper of a certain baking powder has upon it a testimonial signed by me. In reply I wish to remark that in the course of seventeen years' service as medical officer of health I have had to do some analytical work and that occasionally during the same period articles of a dietetic or other nature have been submitted to me by various people for qualitative analysis, several baking powders being amongst the number. As I have usually given a certificate as to purity, &c., I take it that the wrapper in question bore a copy of such a certificate. This does not appear to me to be "powder puffing"; neither have I lent my name for use in connexion with this or any other article. I am not aware therefore that I have infringed any Act of Parliament or by-law of the General Medical Council by giving such a certificate to any person who has considered my analytical report worth seeking. Numbers of medical men give such; hundreds are given every year. Trusting that you will give this explanation the same prominence in your valuable paper that you did the observation referred to.

I remain, Sirs, yours faithfully,

Nottingham, Oct. 15th, 1898. WILLIAM TIEBBLES.

*** We publish the explanation with pleasure.—ED. L.

THE COUNTERFEITING OF ANCIENT COINS.

A WRITER in the *Revue Scientifique* of Oct. 15th states that the Italian manufacturers of coins and medals intended to be sold as ancient have a strange method of giving them the "patina" or superficial oxidation which is supposed to be characteristic of genuine antiques. Large birds, such as turkeys, are made to swallow imitation coins of the Roman emperors, and if the coins when voided do not present the desired appearance they are repeatedly subjected to the same process. The inference is that the effect is due to the action of the intestinal juices and gases.

MEDICAL OFFICERSHIPS IN THE HIGHLANDS AND ISLANDS.

To the Editors of THE LANCET.

SIRS,—Owing to the number of these vacant posts appearing in the "dailies" at present and the harsh treatment often meted out to the unfortunate young gentlemen who accept them you could not do better than direct your readers before accepting such places, particularly Skye and Orkney, to address the last medical officer for an honest opinion of their value and treatment to be expected.

I am, Sirs, yours faithfully,

Oct. 17th, 1898. JOHN TAYLOR, M.D.

THE POPULATION QUESTION IN FRANCE.

ACCORDING to *La Science Française*, there are 8,713,266 families in France with one or more living children, the number in each family being as follows. In 2,640,894 families, or 30·3 per cent. of the whole, there is only 1 child; in 2,364,202, or 27·1 per cent., there are 2 children; in 1,585,960, or 18·2 per cent., 3 children; in 975,616, or 11·2 per cent., 4 children; in 572,285, or 6·5 per cent., 5 children; in 322,651, or 3·7 per cent., 6 children; and, finally, in 251,658, or 2·9 per cent., there are 7 or more children. It is evident, says the writer, that in the matter of posterity the French nation cannot hope to establish a record. In a scientific journal one naturally looks for accuracy, but if the above figures are to be accepted, the population of France, exclusive of barren families and also apparently of single men and women, exceeds 40,000,000. Writing in *La Médecine Moderne* on what he calls "la Veulerie contemporaine," Dr. Piessinger describes a "moral malady," which may or may not be accountable for the paucity of children in French households. "A social epidemic," he says, "has cast its net over the different classes; sparing none, collecting them all into one great flock, where they remain dumb and bereft of ambition. It is the leading vital question of the day this utter absence in modern society of energy, this lack of all initiative. The foundations of the State must be assurred, the public equilibrium must be maintained at any cost. Hence the suppression of individuality, the levelling down of temperament, the crushing of aspiring spirits beneath the roller of uniformity additionally weighted by suspicion and jealousy. Such is the ideal to be attained to, the sublime crown which has to be wrought. Collectivism cannot endure that aught should emerge above the dead level of equality. Its favours are reserved for those who can stoop down to the official standard. Universal mediocrity; such is the dream of the collectivist." Frenchmen would seem to be afraid of large families because in their opinion all the children have to be provided for alike. They have no approval of the law of primogeniture.

THE CLIMATE OF THE DISTRICT AROUND JOHANNESBURG.

A CORRESPONDENT would be very grateful if anyone could tell him from personal knowledge some facts about the climate of the districts lying round Johannesburg. He is desirous of avoiding dust-storms.

M.R.C.S.—Seven teeth defective or deficient in persons under seventeen years of age on the day of entry or ten defective or deficient teeth in persons above the age of seventeen years disqualify. No departure from this rule is permitted without special authority from the Admiralty. Both classes of persons must, however, possess at least four perfectly sound opposing molars—viz., two in each jaw, and the same number of incisors similarly placed. A tooth is to be considered as defective when it cannot be made permanently serviceable by dental repair. In all cases due regard is to be paid to the condition of the remaining teeth and the probability of their lasting for at least twelve years. Credit is to be given for teeth which have not erupted, unerupted wisdom teeth excepted.

Registered Medical Student cannot take fees for attendance upon midwifery cases, and there is no "institution" which can give him the legal right to do so except such bodies as can transform him—after examination—into a qualified and registered medical man. Any medical man employing a student to attend midwifery cases for him would be liable to censure or worse from the General Medical Council, whose recent pronouncement about unqualified assistants seems to have escaped our correspondent's notice.

A Father of Nine.—We cannot publish a letter inviting suggestions for medical treatment and we do not give medical advice ourselves. Recourse must be had to the family medical man.

Enquirer.—We see no reason for believing that the medical men were privy to the insertion of the paragraph.

Mr. J. Williams.—We do not know of any work treating the subject named.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 20th, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
Oct. 14	29·69	S.E.	0·09	84	59	47	50	51	Overcast
,, 15	29·21	S.E.	0·11	59	59	51	50	52	Overcast
,, 16	29·11	N.E.	0·42	79	56	50	50	51	Hazy
,, 17	28·89	S.	0·25	105	65	51	55	56	Fine
,, 18	28·79	S.W.*	0·54	93	60	55	55	55	Raining
,, 19	29·35	S.W.	0·05	77	58	51	52	53	Cloudy
,, 20	29·72	S.W.	...	79	59	50	50	51	Cloudy

During the week marked copies of the following newspapers have been received: *Scotsman, Birmingham Post, Eastbourne Chronicle, Western Gazette, Manchester Courier, East Essex Times, Hampshire Telegraph, South Wales Chronicle, Warwick Advertiser, Times of India, Pioneer Mail, Kent Messenger, Chatham News, Lancaster Guardian, Bedford Times, Citizen, Rochester Journal, Sussex Daily News, Brighton Gazette, Cambridge Express, Cheshire Observer, Yorkshire Post, Sheffield Telegraph, Architect, Derbyshire Courier, Eastern Morning News, Glasgow Herald, Builder, Blackpool Gazette, Liverpool Daily Post, Dundee Advertiser, Oban Times, Worcester Herald, Buxton Advertiser, Ilfracombe Gazette, Leeds Mercury, East Riding Telegraph, Somerset County Herald, Bristol Mercury, Sanitary Record, Radnorshire Standard, Tit-Bits, Optician, Rangoon Times, Farm and Home, Madras Times, Indian Daily News, Calcutta Local Government Chronicle, Hertfordshire Mercury, Liverpool Courier, City Press, Public Health Engineer, Reading Mercury, Bristol Times and Mirror, Local Government Journal, Surrey Advertiser, Freeman's Journal, Poole Herald, Shrewsbury Advertiser, Weekly Free Press and Aberdeen Herald, Macclesfield Courier and Herald, Cheltenham Examiner, New York Herald, Craven Herald, Keighley Herald, Louth Times, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Messrs. Arnold and Sons, Lond.; Messrs. Allen and Hanburys, Lond.; Mr. J. W. Arrowsmith, Bristol; Mr. E. A. Armstrong, Midgham.

B.—Dr. T. Beattie, Newcastle-on-Tyne; Mr. H. Bridgewater, High Wycombe; Messrs. Bayer and Co., Elberfeld; *Birmingham Daily Post*; Birmingham City Asylum, Medical Superintendent of; Dr. Bond, Gloucester; Mr. A. Bowman, Belfast; Mr. J. R. de C. Boscawen, Truro; T. B. Browne, Ltd., Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Mr. J. P. Bush, Bristol; Birmingham and Midland Counties Sanatorium, Secretary of; Messrs. Bowen and McKechnie, Lond.

C.—Mr. W. Coates, Rushbrooke; Messrs. W. and R. Chambers, Edinburgh; *Canada Lancet*, Toronto, Business Manager of; Messrs. Cassell and Co., Lond.; Carruthers, Congleton; Cumberland Infirmary, Carlisle, Secretary of; Dr. Clippingdale, Lond.; Mr. J. D. Campbell, Lond.; Dr. H. Campbell, Lond.; Dr. Cahill, Lond.; Dr. C. Coles, Leicester; C. B.; Mr. A. Cox, Lond.; Cardiff Infirmary, Secretary of; Messrs. Carnrick and Co., Lond.; Dr. Colquhoun, Glasgow.

D.—Sir Dyce Duckworth, Lond.; Dundee Medical Library, Secretary of; Surgeon-Captain Donaldson, New York, U.S.A.; Messrs. Dawbarn and Ward, Ltd., Lond.; Dr. J. H. Dauber, Lond.; Mr. A. Duke, Cheltenham.

E.—Mr. A. R. F. Evershed, Penzance; E. M.

F.—Miss Frith, Lond.; Messrs. Fairchild Bros. and Foster, Lond.; F. L., Harrogate.

G.—Mr. J. L. Green, Salisbury; Messrs. C. Griffin and Co., Lond.; Messrs. Gordon, Alexander, and Co., Lond.; Mr. A. B. George, Craven Arms; Dr. E. Gwynn, Lond.; Messrs. W. Green and Sons, Edinburgh; Grosvenor Hospital for Women, &c., Secretary of; Dr. J. Galloway, Lond.; Dr. J. H. Goodliffe, Northampton; Dr. G. A. Gibson, Edinburgh.

H.—Mr. H. Hutchinson, East Ham; Dr. P. S. Hitchins, Lond.; Mr. M. Hoff, Lond.; Messrs. Hastings Bros., Lond.; Hospital for Diseases of the Throat, Lond.; Messrs. F. W. Holmes and Co., Gateshead-on-Tyne; Captain M. P. Holt, Deolali, India; Dr. W. H. Hewlett, Wivenhoe; Dr. C. Holman, Lond.; Mr. T. Garrett Horder, Cardiff; Mr. J. Heywood, Manchester; Mr. F. B. Hollis, Lond.; Messrs. Haasenstein and Vogler, Geneva.

J.—Dr. J. B. Jackson, Dublin; Mr. J. T. Jones, Hull; Dr. R. P. Jones, Prudhoe-on-Tyne; Mr. A. D. Jollye, Lond.

K.—Kronthal Co., Lond.; Messrs. Knight, Frank, and Rutley, Lond.; Herren Krüger and Co., Leipzig; Mr. B. Kühn, Lond.

L.—Mr. W. S. Lord, Manchester; L. W.; Messrs. Lee and Nightingale, Liverpool; Messrs. Lever Bros., Lond.

M.—Mr. P. Möller, Lond.; Mr. J. G. Murray, Scarborough; Medical Society of Victoria, Melbourne, Hon. Secretary of; Messrs. C. Mitchell and Co., Lond.; Dr. S. K. Mullick, Lond.; Mr. Valentine Matthews, Lond.; Dr. E. J. D. Mitchell, Eltham.

N.—National Society for Aid to the Sick and Wounded in War, Lond., Secretary of; Dr. J. H. Nicoll, Glasgow.

O.—Oldham Infirmary, Secretary of; Dr. W. M. Ord, Lond.; Dr. G. Ogilvie, Lond.

P.—Mr. Y. J. Pentland, Edinburgh; Messrs. Parke, Davis, and Co., Lond.; Mr. F. Purshouse, Lond.; Mr. F. Pamphiton, Gloucester; Dr. G. S. Perkins, Lond.; Dr. C. Porter, Stockport; Plumbers' Company, Lond.; Dr. A. M. Paterson, Liverpool.

Q.—Q., Leytonstone.

R.—Mr. W. R. Rice, Coventry; Mr. W. B. Rotheroe, Lond.; Royal College of Physicians of Ireland, Registrar of; Mr. H. Ramsay, Lond.; Messrs. Reynolds and Branson, Leeds; Rotherham Hospital, Secretary of; Dr. J. S. R. Russell, Lond.

S.—Dr. F. Sydenham, Walsall; Messrs. Stubbs, Norwich; Dr. J. A. Shaw-Mackenzie, Lond.; Mr. H. Sell, Lond.; St. Mary's Hospital Medical School, Lond., Secretary of; Mr. W. P. Stocks, Salford; Mr. A. Stenhouse, Glasgow; Dr. H. J. Slane, Hull; Sanitary Wood Wool Co., Lond.; Messrs. Street Bros., Lond.; Messrs. Smith, Elder, and Co., Lond.

T.—Dr. J. Taylor, Bissay; Messrs. W. Thornhill and Co., Lond.; Dr. E. F. Trevelyan, Leeds; Mr. F. Treves, Lond.

W.—Dr. S. R. Wells, Lond.; Mrs. E. Weby, Bristol; Widows and Orphans, Society for Relief of; *Welshman*, Carmarthen; Mr. Welshman, Lond.; Worthing Corporation, Clerk of; Wills, Ltd., Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. F. Adams, Harleston; Messrs. Austin and Sons, Hertford; Messrs. Armour and Co., Lond.; A. W.; A. Z., Lond.; Dr. J. Althaus, Lond.; Anglo-Swiss Condensed Milk Co., Lond.; Dr. J. Adam, West Malling; A. B.; A. de P.; Alpha, Tunbridge Wells.

B.—Mr. C. L. Bedford, Birmingham; Dr. B. Bramwell, Lond.; B. F. H.; Mr. J. H. Booth, Chesterfield; Messrs. A. Bishop and Sons, Lond.; Mr. A. Brance, Lydd; Mr. A. E. Barker, Lond.; Mr. R. Baker, Lond.; Messrs. W. H. Bailey and Son, Lond.; Branco, Edinburgh; Mr. R. Bebb, Brighton; Messrs. Brown, Gould, and Co., Lond.; Beta, Liverpool; Dr. G. F. Blandford, Lond.; Bristol Royal Hospital for Sick Children, Secretary of; Dr. Bagshawe, St. Leonard's-on-Sea; Mr. L. M. Buckell, Romsey; Mr. B. Brown, Huddersfield; B., Lond.

C.—Dr. R. Cox, Theale; Messrs. S. B. Clark and Son, Lond.; Messrs. Crossley, Moir, Lond.; Mr. W. Cook, Alcester; Chelsea Hospital for Women, Secretary of; Mr. H. W. Cox, Lond.; Mr. F. W. Clarke, Chorlton-cum-Hardy; Miss Colclough, Lond.; Dr. Cameron, Campden; Messrs. Corbyn, Stacey, and Co., Lond.; Mr. W. Carson, Belfast; Messrs. T. Cook and Son, Lond.; C. G. H.; Church Stretton Private Asylum, Medical Superintendent of.

D.—Mr. A. K. Dresser, Padstow; Messrs. Dowie and Marshall, Lond.; Dr. R. Dickson, Whitehaven; Mr. P. Davidson, Lond.; Messrs. J. Defries and Sons, Lond.; Mr. F. Dale, Welling; Dover Hospital, Secretary of; Doctor, Bedlington; Dr. J. R. Dalrymple, Yetholm; Derby County Asylum, Clerk of; Dr. H. E. Danlell, Strood; Messrs. A. De St. Dalmas and Co., Leicester.

E.—Dr. R. Eustace, Bournemouth; Messrs. Eason and Son, Dublin; Mr. A. Elliott, Edinburgh; E. F.; E. J. N. C.; E. C. P. E.

F.—Dr. L. Fischer, Jhansi, India; Mr. A. W. Forsaith, Lond.; Mr. W. A. Frost, Lond.; F. H. H.; Fellows Manufacturing Co., Lond.; Miss M. J. Fergusson, Broughty Ferry; Mr. F. H. Fawcett, Woburn Sands; Mr. J. FitzGerald, Queenstown; Fraser, Longsight.

G.—Dr. J. H. Glenn, Dublin; G. P.; G. H. A.; Gloucester County Asylum, Clerk of; Mr. D. Gestetner, Lond.; G. W.; Messrs. Gale and Co., Lond.

H.—Mr. J. Hutchinson, Lond.; Dr. S. Hyde, Buxton; Mr. W. Halley, Lond.; H. H. H.; Mr. T. Hickling, Sulgrave; Mr. C. H. Huish, Lond.; Dr. V. D. Harris, Lond.; Dr. D. Henderson, Llandebie; H. R.; Mr. J. Halliwell, Winchcombe; Mr. R. Haslam, Bolton; H. J. J.; H. W.; H. C. W.

J.—J. J. H.; J. A.; J. A. W.; J. C. P.; J. M. F.

K.—Dr. C. R. Killick, Williton; Mr. A. F. S. Kent, Lond.; Dr. Kanitz, Szolnok, Hungary.

L.—Mr. C. F. Le Sage, Lond.; Mr. H. K. Lewis, Lond.; London Association of Nurses, Lady Superintendent of; London Post-Graduate Course, Treasurer of; Mr. E. R. S. Lipscomb, Starcross; Mrs. M. Luther, Craven Arms, Salop; Dr. J. Lowe, Lond.; Mrs. Loverock, Rugby.

M.—Mr. G. Makin, Hadleigh; Mr. W. Malville-Davison, Liverpool; Milk Preparations Co., Brentwood; M. L. B.; Messrs. J. Macfelhouse and Son, Glasgow; Dr. McCleary, Croydon; Mr. F. H. Moore, Hunstanton; Mecredy Manufacturing Syndicate, Lond.; Mutual Life Insurance Co. of New York, Lond., General Manager of; Dr. J. G. Moyles, Liverpool; Mysore Government, Senior Surgeon's Office, Bangalore, India.

N.—Mr. W. D. Nott, Lond.; Newcastle-on-Tyne Dispensary, Secretary of; Messrs. Newton, Chambers, and Co., Thorncliffe.

O.—Mr. E. Owen, Lond.; *Oldham Standard*.

P.—Mr. T. B. Parker, Philadelphia; Messrs. C. Pool and Co., Lond.; Mr. J. L. Pinchin, Leytonstone; Messrs. Pownceby and Co., Lond.; P. B.

R.—Mr. J. Reidy, Pulbeck; Dr. T. E. R. Roddis, Snettisham; Ross, Ltd., Lond.; Dr. L. Roberts, Caerswa; R. P. B.

S.—Dr. Spencer, Redcar; Mr. P. Swain, Plymouth; Scholastic, Clerical, &c., Association, Lond.; Dr. S.; South Devon Hospital, Plymouth, House Steward of; Mr. H. W. Scriven, Lond.; Dr. S. H. Snell, Grays; S. T.; Stockport Infirmary, Secretary of; St. Mungo's College, Glasgow, Cashier of; Mr. J. Sampson, York; Statim, Neath; Surgeon, Liverpool; Mr. A. Saxlehner, Lond.

T.—Dr. B. Taylor, Nottingham; Captain R. G. Turner, Bombay; Mr. R. D. Thomas, Welshpool; Dr. F. W. Tunnicliffe, Lond.; T. L. H.

U.—University College of South Wales, Cardiff, Secretary of.

V.—Mrs. A. A. Verity, Garndiffaith. Victoria Carriage Works, Lond.; Mr. W. Van Praagh, Lond.

W.—Mr. E. S. Warburton, Treherbert; W. B., Liverpool; Dr. W.; W. H. P.; W. F. G.; W. E. D.

EVERY FRIDAY.

THE LANCET.

PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.
Terms for Position Pages and Serial Insertions on application.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.